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**FIGURE 4773B**

GTTAGGTCAGAAGGAGTACTGGTGCGTGGGGGCCCTTACCCAGGGTTGAGTATTTTATCTGTAAAATGTTATCTG  
CCCTTTGGCTGCATTGGAATTTACAGAGAAGGCTGCAGAGGCCTGGGTTACACAGCCTGAGTCACAACGTGGGAAG  
GAATCTCTGCCACGGGAAAGGTGGGCGGAAGCAGCTGGCAGCCTGGGGCGTGCTTCAGGCTCCTCCCTCTAAGGG  
GCGCCATGGGAACAGGCTCCGGAGGGAGCCGGCGTCTGAAAGGCCCGGGACCTGCTGCAGTGCCAGAGGGGCC  
TCTGGAGCAGGCCTGGCTTTTAAATGGGGGGCTGAATTCAGCTCACACACACCTCAAGTCCAACCTTACTTTCT  
TCAGCCAGAATACATTTCTTGTAACCTGGCTTGTGCTTGGCTTTTAAAGATGGTGTATGTTTGTAATAATAT  
TCTTCTGGGCTCAAAAGCTAGCTTGAGGGGGCAGATGCCCCAGGTGTCCAGCTCCACAGCCCTGGCAGATCCC  
AGACCCCTTGGTGGCAGGTCCAGAGCCTAGGTGGTAGGAGCTTGATCTTGTTTCTGCCCTTACCCCTCAGTAG  
TGGGGCTGCGAGGTAGTAGACAGGATGCCAGTTAAGTTGAATTTAGATAGAAAATAATTTAGATAAATAT  
GTTCTATCTAATACATGGGACAGATGTTATTTTAGAGATAGGATCTTGCTCTGTTGCCAGGCTGGAGTGTAGT  
GGTATGATCATAGCTCACCACAACCTTGAACCTCCAGGCTCAAGCGATCCTCCCGCCTTAAGTGCCTGAGTAGCT  
GGGACTACAGGCATGCACCACCACGCCCAGCTAATTTTCTTATTTTTGTAGAGACAGGGTCTCACTGTGTGC  
CTCACTCGAGCTGCTGACCTCAAGTGATCCTCCACCTCAGCCTGCCAAAGCACTGGGATTACAGGCATGAGCCA  
CCATGCCTGGCCAGGACATATTTGAAATGGGGAGATTTAAAAATTCTGATGATTAGACTGAATCCTCAGACGTT  
CTGGTTTGATTGTTGTGGGTGTAGCCCAGGCATGGGATTTTTAAAGAGCTGCTCAGGTAATCCAATTTAATTG  
CGTGCCTACTTGGGTTTTTTGTTTGTATTGTTTTGCTAAACCTGGCAACCCTACCGAGTAGGGATTAGC  
AGTAACCTATCTGAAATTTAGAGGTGTTTTGGGGGTGGGGCGAGGGTTTCTGTAGTAGACTCAGATTTTACATGG  
CCCTGAGCTGCCCTTGCCTTCAGTTGGAAGCCACGCAAATGAACTGAACCAGGAGTGAGCTTCGTGTACATTAT  
CTATTAGAAAATGAAGTACCTTCTGGTTCAGCTAGTCCCTGTGCGTTGAGAGGCTTTAAGAACTTCTAGTAAAA  
ATGTTTTTTCTTTTAGCTTTGAATTGGCCAGAGTTTATCCTAGATTATTTATTTTAAATGGTAGAATTCCTT  
GCGAACTGTACAGAGAAATTCCTTTTCATGACTTTATTTCTGACCTATTAACATGAACAGGCCAGGCATGGT  
GGCTCAGCCTGTAATCCTAGCACTTGGGAGGCAGTGGCAGGCGGATCACTTGAGCTCAGGAGTCCTAAACCAGC  
CTGGGCAACATAGTGATACCTTGCTCTACCAAAGTT

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**FIGURE 4774**

MKGCEELLKDVLSVESAGTLPCAPEIPDCVEQGSEVTGPTFADGELIPREPGFFPEDEEEAMTLAPPEGPQELYT  
DSPMESTQSLEGSVGSPA EKDGGLGGLFLPEDKSLVHTPSMTTSDLSTHSTTSLISNEEQFEDYGEGDDVDCAPS  
SPCPDDETRTNVYSDLGSSVSSSAGQTPRKMRHVYNSELLDVYCSQCCKINLLNDLEARLKNLKANS PNRKISS  
TAFGRQLMHSSNFSSSNGSTEDLFRDSIDSCDNDITEKVSFLEKKVTELENDSLTNGDLKSKLKQENTQLVHRVH  
ELEEMVKDQETTAEQALEEEARRHREAYGKLEREKATEVELLNARVQOLEEENTE LRTTVTRLSQTEKLDEERQ  
RMSDRLEDTSRLKDEMDLYKRMDKLRQNRLEFQKEREATQELIEDLRKELEHLQMYKLCERPGRGRSASSGL  
GEFNARAREVELEHEVKRLKQENYKLRDQNDLNGQILSLSLYEAKNLFAAQTKAQSLAAEIDTASRDELMEALK  
EQEEINFRLRQYMDKIILAILDHNPSILEIKH

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**FIGURE 4775**

GGCTGATTGGCGCTTCTGCGGCGGATCCTCGGGCGGGCAGCCGGGCCGGCGCGTCACGTGGCCCACGGCGTCCAG  
GGCGACCAGCCGCGGGCCGCGAGGGCATGGACCTTCAGGCCGCCGGGGCCAGGCGCAGGGGGCCGCGGAGCCGTC  
TCGGGGCCCCCGCTGCCTAGCGCGCGGGGGGCGCCCCCAGCCCGGAGGCTGGCTTTGCTACAGCTGACCACTC  
CAGTCAGGAGAGAGAGACTGAGAAGGCTATGGATCGACTAGCCCGTGAACACAGAGCATTCTAATGACAGTCC  
TGCCCGGGGTGAGGGCACCCATTCTGAAGAGGAAGGCTTTGCCATGGATGAGGAGGACTCTGATGGAGAAGTGA  
TACCTGGGAGCTGTCAGAAGGGACAACTGTCCACCAAGGAACAGCCTGGCGATCTTTTAAATGAGGACTGGGA  
CTCGGAGTTGAAAGCAGATCAAGGGAATCCATATGATGCTGACGACATCCAGGAGAGCATTCTCAAGAGCTTAA  
ACCTTGGGTGTGCTGTGCCCCACAAGGAGACATGATCTATGACCCCGAGCTGGCACCATCCGCCTCCACTGATACC  
CTATTATTCCAAGATGGTCTTTGAAACAGGACAGTTTGACGATGCTGAAGATTGAGTGTGGAGCTTTCTGCCTTG  
TAGGTGGGCGGGCCTCCACGTCAAGATCTCTTTTCCTGTCTTGAGGTTGAAAAGTCATATCTGAGAAAATGTTTG  
CAGTGACCCCTAGTCTGGGGTACACAGACCAGTGTTCCTTATTGACAGTGTTCATAAGGCCCCGTCATTCTCGC  
CAGTCTGTTGTTGTTCTTAATGGGCTCCTCCTTGAAATGTGTGTGTTTGTGTCAAGAGGAGTTGTGTTCTTTG  
TAAATAAAGGTTAAAAAGAG

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**FIGURE 4776**

MDLQAAGAQAQGAAEPSRGPPPLPSARGAPPSPEAGFATADHSSQERETEKAMDRDLARGTQSIPNDSPARGEGTHS  
EEEGFAMDEEDSDGELNTWELSEGTCPPKEQPGDLFNEDWDSELKADQGNPYDADDIQESISQELKPWVCCAPQ  
GDMIYDPSWHPPLIPYYSKMVFETGQFDDAED



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**FIGURE 4777**

GAGGCGGAGCGGGGAACGAGGCCGTCGGCCATTTTGTGTCTGCTTCCTGTGGGACGTGGTGGTAGCCGTTGGGTT  
GGGAAAGTGAGGGATTTTTGGCCTCGTTTTCTCCTGCTTCTTTCTCCTCCCTTTTACTTTGCCGGTAGAACACAG  
TTATGGGTCGCAAGAAGAAGCAGCTGAAGCCGTGGTGCTGGTATTGTAATAGAGATTTTGATGATGAGAAGA  
TCCTTATTCAGCACCAAAAAGCAAAGCATTTTAAATGCCATATATGTCACAAGAAATTGTATACAGGACCTGGCT  
TAGCTATTCAATTGCATGCAGGTACATAAAGAAACAATAGATGCCGTACCAATGCAATACCTGGAAGAACAGACA  
TAGAGTTGGAAATATATGGTATGGAAGGTATTCCAGAAAAAGACATGGATGAAAGACGACGACTTCTTGAACAGA  
AAACACAAGAAAGTCAAAAAAAGAAGCAACAAGATGATTCTGATGAATATGATGATGACGACTCTGCAGCCTCAA  
CTTCATTTTCAGCCACAGCCTGTTCAACCTCAGCAAGGTTATATTCTCCAATGGCACAGCCAGGACTGCCACCAG  
TACCAGGAGCACCAGGAATGCCCTCCAGGCATACCTCCATTAATGCCAGGTGTTCTCTCTGATGCCAGGAATGC  
CACCAGTTATGCCAGGCATGCCACCTGGATTGCATCATCAGAGAAAATACACCCAGTCATTTTGGCGTGAAAACA  
TAATGATGCCAATGGGTGGAATGATGCCACCTGGACCAGGAATACCACCTCTGATGCCTGGAATGCCACCAGGTA  
TGCCCCACCTGTTCCACGTCTGGAATTCCTCCAATGACTCAAGCACAGGCTGTTTCAGCGCCAGGTATCTTA  
ATAGACCACCTGCACCAACAGCAACTGTACCTGCCCCACAGCCTCCAGTTACTAAGCCTCTTTTCCCCAGTGCTG  
GACAGATGGGGACACCTGTCAAGCTCAAGTACAGCTTCATCCAATTCAGAAAGTCTGTCTGCATCTTCTAAAG  
CTCTGTTTCTTAGCACAGCACAGCTCAGGCAGCTGTCCAAGGACCTGTTGGTACAGATTTCAAACCTTAAATA  
GTACCCCTGCAACAACACTACAGAACCCCCAAAGCCTACATTCCCTGCTTATACACAGTCTACAGCTTCAACAAC  
GTACAACAAATAGTACTGCAGCTAAACCAGCGGCTTCAATAACAAGTAAGCCTGCTACACTTACAACAAC  
CAACCAGTAAGTTGATCCATCCAGATGAGGATATATCCCTGGAAGAGAGAAGGGCACAGTTACCTAAGTATCAAC  
GTAATCTTCCTCGGCCAGGACAGGCCCCCATCGGTAATCCACCAGTTGGACCAATTGGAGGTATGATGCCACCAC  
AGCCAGGCATCCACAGCAACAAGGAATGAGACCCCAATGCCACCTCATGGTCAGTATGGTGGTCATCATCAAG  
GCATGCCAGGATACCTTCCTGGTGCTATGCCCCCGTATGGGCAGGGACCGCCAATGGTGCCCCCTTACCAGGGTG  
GGCCTCCTCGACCTCCGATGGGAATGAGACCTCCTGTAATGTGCGAAGGTGGCCGTTACTGATCTTACTTCATCC  
AGTCTAATAGGTTTGGAGATTAAACCTTTTCTCAACTTGTGCTGTTTATATAGCCAAGCTTCCGTCATAAAGGCT  
TCATTGTGACTTTAACAACATTATCTTCCACATACCAGGAACCTATTGGACATTTATTTTACATGGGAAAAATT  
ATTTGGAATAATAAAGCAGGAACCTTTCTGTAAGTTGCAATTTATACTGTATGGCTTCTTTTTCATGTTTCATCT  
AGGTTTTTGAAGTGAAGTATAGTAAATTTGGTTCGTTAAATTTGTGAAGGCGCTGGAATTACATGAACATACCAC  
CCTAGTAAAGGCAAGTTCTGTAAGCTTACATTGCTATTTGTAAAGTTTGCCTTCACAGCATTTCAGATGCTGTTG  
GACTTCATGTCCCAACCTAGCTTGGTGAGGGCTGTAAGTGTTCCTCAAGTACTTGTACATTGGAAGTCTGAATGT  
GTAACAATATTTAATGTATTTAGAGTTCCTCATGTTGCAGGGTTTAAAGAAATCTGACCCACCAAGGTCATGTGAC  
TTTTCTGTACTGTTAACTTCATTGTAATAAAATGAGAGAAAAATTTATGCCTTTTTATTTCATAACCCAGCTGTG  
GACCACTGCCTGAAAGGTTTGTACAGATGCATGCCACAGTAGATGTCCACATAATAAAATTCATAGTTACCAATG  
CA

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**FIGURE 4778**

ATGGCGGCGGCGGCGGTGGTGGAGTTCCAGAGAGCCCAGTCTCTACTCAGCACCGACCGGGAGGCCTCCATCGAC  
ATCCTCCACTCCATCGTGAAGCGTGACATTTCAGGAAAACGATGAAGAGGCAGTGCAAGTCAAAGAGCAGAGCATC  
CTGGAAGTGGGATCTCTCCTGGCAAAGACTGGACAAGCTGCAGAGCTTGGAGGACTCCTGAAGTATGTACGACCC  
TTCTTGAATTCCATCAGCAAGGCTAAAGCAGCTCGCCTGGTCCGATCTCTTCTTGATCTGTTTCTTGATATGGAA  
GCAGCTACAGGGCAGGAGGTGAGCTGTGTTTAGAGTCCATCGAATGGGCCAAGTCAGAGAAAAGAAGCTTTCTTA  
CGCCAAGCTTTGGAGGCAAGACTGGTGTCTTTGTACTTTGATACCAAGAGGTACCAGGAAGCATTGCATTGGGT  
TCTCAGCTGCTGCGGGAGTTGAAAAAGATGGACGACAAAGCTCTTTTGGTGGAAGTACAGCTTTTAGAAAGCAAA  
ACATACCATGCCCTGAGCAACCTGCCGAAAGCCCGAGCTGCCTTAACTTCTGCTCGAACCACAGCAAATGCCATC  
TACTGCCCCCTAAATTGCAGGCCACCTTGGACATGCAGTCGGGTATTATCCATGCAGCAGAAGAGAAGGACTGG  
AAAAGTGGTACTCATACTTCTATGAGGCATTTGAGGGTTATGACTCCATCGACAGCCCCAAGGCCATCACATCT  
CTGAAGTACATGTTGCTGTGCAAAATCATGCTCAACACCCCGAGAAGATGTCCAGGCTTTGGTGAGCGGGAAGCTT  
GCACTTCGGTATGCAGGGAGGCAGACAGAAGCATTAAATGCGTGGCTCAGGCTAGCAAGAACAGATCACTGGCA  
GATTTTGAAGGCTCTGACAGATTACCGGGCAGAGCTCCGGGATGACCAATCATCAGCACACACTTGGCCAAG  
TTGTATGATAACTTACTAGAACAGAATCTGATCCGAGTCATTGAGCCTTTTCCAGAGTACAGATTGAACACATA  
TCTAGTCTCATCAAATCTCCAAGGCCGACGTGGAAAGGAAATTATCACAGATGATTCTTGACAAGAAATTCAT  
GGGATTTTGGACCAGGGGGAGGGTGTCTTGATTATTTTCGATGAACCCCGAGTAGATAAACTTACGAAGCTGCT  
CTGGAAACAATTGAGAACATGAGCAAAGTAGTGGATTCCCTCTACAACAAAGCCAAGAACTGACATAG

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**FIGURE 4779**

MAAAVVEFQRAQSLLSTDREASIDILHSIVKRDIQENDEEAVQVKEQSILELGSLLAKTGQAAELGGLLKYP  
FLNSISKAKAARLVRSLLDLFLDMEAATGQEVCLCLESIEWAKSEKRTFLRQALEARLVSLYFDTKRYQEALHLG  
SOLLRELKKMDDKALLVEVQLLESKTYHALSNLPKARAALTSARTTANAIYCPPKLQATLDMQSGIIHAAEEKDW  
KTAYSIFYEAFEGYDSIDSPKAITSLKYMLLCKIMLNTPEDVQALVSGKLALRYAGRQTEALKCVAQASKNRS  
LADFEKALTDYRAELRDDPIISTHLAKLYDNLLEQNLRVIEPFSRVQIEHISSLIKLSKADVERKLSQMILDKKFH  
GILDQGEGLIIFDEPPVDKTYEAALETIQNMSKVVDLSYNKAKKLT

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**FIGURE 4780**

GGCAGGCCCGCGCCCGCGCCCGGACTTTGCCATCGGCGGGGCGAGTCGCGGGATGCGCCCGGGAGCCACAGCCTGA  
GGCCCTCAGGTCTCTGCAGGTGTCGTGGAGGAACCTAGCACCTGCCATCCTCTTCCCAATTTGCCACTTCCAGC  
AGCTTTAGCCCATGAGGAGGATGTGACCGGGACTGAGTCAGGAGCCCTCTGGAAGCATGGAGACTGTGGTGATTG  
TTGCCATAGGTGTCTTGGCCACCATCTTTCTGGCTTCGTTTGACGCCCTTGGTGCTGGTTTGAGGCAGCGCTACT  
GCCGGCCGCGAGACCTGCTGCAGCGCTATGATTCTAAGCCCATTGTGGACCTCATTGGTGCCATGGAGACCCAGT  
CTGAGCCCTCTGAGTTAGAAGTGGACGATGTCGTTATCACCAACCCCCACATTGAGGCCATTCTGGAGAATGAAG  
ACTGGATCGAAGATGCCTCGGGTCTCATGTCCCACTGCATTGCCATCTTGAAGATTTGTCACACTCCGACAGAGA  
AGCTTGTGGCATGACAATGGGCTCTGGGGCCAAGATGAAGACTTCAGCCAGTGTGAGCGACATCATTGTGGTG  
CCAAGCGGATCAGCCCCAGGGTGGATGATGTTGTGAAGTCGATGTACCCTCCGTTGGACCCCAAACCTCTGGACG  
CACGGACGACTGCCCTGCTCCTGTCTGTCTGTCAGTCACCTGGTGCTGGTGACAAGGAATGCCTGCCATCTGACGGGAG  
GCCTGGACTGGATTGACCAGTCTCTGTCTGGCTGCTGAGGAGCGTTTGAAGTCCTTCGAGAAGCAGCCCTAGCTT  
CTGAGCCAGATAAAGGCCTCCAGGCCCTGAAGGCTTCTGTCAGGAGCAGTCTGCAATTTAGTGCCTACAGGCCA  
GCAGCTAGCCATGAAGGCCCTGCCGCCATCCCTGGATGGCTCAGCTTAGCCTTCTACTTTTTCTATAGAGTTA  
GTTGTTCTCCACGGCTGGAGAGTTCAGCTGTGTGTGCATAGTAAAGCAGGAGATCCCGTCAGTTTATGCCTCTT  
TTGCAGTTGCAAACTGTGGCTGGTGAGTGGCAGTCTAATACTACAGTTAGGGGAGATGCCATTCACTCTCTGCAA  
GAGGAGTATTGAAAAGTGGTGGACTGTCAGCTTTATTTAGCTCACCTAGTGTTCAGAAAATTGAGCCACCGT  
CTAAGAAATCAAGAGGTTTACATTAAAATTAGAATTTCTGGCCTCTCTCGATCGGTCAGAATGTGTGGCAATTC  
TGATCTGCATTTTCAGAAGAGGACAATCAATTGAAACTAAGTAGGGGTTTCTTCTTTTGGCAAGACTTGTACTCT  
CTCACCTGGCCTGTTTCATTTATTTGTATTATCTGCCTGGTCCCTGAGGCGTCTGGGTCCTCCTCTCCCTTGCA  
GGTTTGGGTTTGAAGCTGAGGAACACAAAGTTGATGATTTCTTTTTATCTTTATGCCTGCAATTTTACCTAGC  
TACCACTAGGTGGATAGTAAATTTATACTTATGTTTCCCTAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4781**

METVVIVAIGVLATIFLASFAALVLVCRQRYCRPRDLLQRYDSKPIVDLIGAMETQSEPSELELDDVVITNPHIE  
AILENEDWIEDASGLMSHCIAILKICHTPTEKLVAMTMGSGAKMKTSASVSDIIVVAKRISPRVDDVVKSMPPL  
DPKLLDARTTALLSVSHLVLVTRNACHLTGGLDWIDQSLSAAEERLEVLREAALASEPDKGLPGPEGFLQEQA  
I

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**FIGURE 4782**

ATGCTGAAGCTCACACCCTTGCCCTCCAAGATGAAGGTTTCTGCAGCGCTTCTGTGCCTGCTGCTCATGGCAGCC  
ACTTTCAGCCCTCAGGGACTTGCTCAGCCAGATTTCAGTTTCCATTCCAATCACCTGCTGCTTTAACGTGATCAAT  
AGGAAAATTCCTATCCAGAGGCTGGAGAGCTACACAAGAATCACCAACATCCAATGTCCCAAGGAAGCTGTGATC  
TTCAAGACCCAACGGGGCAAGGAGGTCTGTGCTGACCCCAAGGAGAGATGGGTCAGGGATTCCATGAAGCATCTG  
GACCAAATATTTCAAATCTGAAGCCATTGA

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**FIGURE 4783**

MLKLTPPSKMKVSAALLCLLLMAATFSPQGLAQPDVSIPITCCFNVINRKIPQRLSYTRITNIQCPKEAVI  
FKTQRGKEVCADPKERWVRDSMKHLDQIFQNLKP

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**FIGURE 4784**

CTGGAACCCGGAAGCGGCAGCGCGGCGGACCCGGCGGGCGGGCTCTGGGCGCGGGAATCCCGGCGGATCCCGGG  
CGGGCGGATGACCCCCAGCCCTACCCTTGGTGCCGCCTCCTCCTCTCTCCTTTCTCCTCCGGCAGCCAGCGCGCC  
TGTGTCTCTCTAGGAAGGGGTAGGGGAGGGGCGTCTGGAGAGGACCCCCGCGAATGCCCCACGTGACGTGCAGT  
CCCCCTGGGGCTGTTCCGGCCTGCGGGGAACATGGGCGTGCTCAGGGTTCGGACTGTGCCCTGGCCTTACCGAGGA  
GATGATCCAGCTTCTCAGGAGCCACAGGATCAAGACAGTGGTGGACCTGGTTTCTGCAGACCTGGAAGAGGTAGC  
TCAGAAATGTGGCTTGTCTTACAAGGCCCTGGTTGCCCTGAGGCGGGTGCTGCTGGCTCAGTTCTCGGCTTTCCC  
CGTGAATGGCGCTGATCTCCACGAGGAACTGAAGACCTCTACTGCCATCCTGTCCACTGGCATTGGCAGTCTTGA  
TAAACTGCTTGATGCTGGTCTCTATACTGGAGAAGTGACTGAAATTGTAGGAGGCCAGGTAGCGGCAAACTCA  
GGTATGTCTCTGTATGGCAGCAAATGTGGCCCATGGCCTGCAGCAAAACGTCCTATATGTAGATTCCAATGGAGG  
GCTGACAGCTTCCCGCCTCCTCCAGCTGCTTCAGGCTAAAACCCAGGATGAGGAGGAACAGGCAGAAGCTCTCCG  
GAGGATCCAGGTGGTGCATGCATTTGACATCTTCAGATGCTGGATGTGCTGCAGGAGCTCCGAGGCACTGTGGC  
CCAGCAGGTGACTGGTTCTTCAGGAACGTGAAGGTGGTGGTTGTGGACTCGGTCACTGCGGTGGTTTCCCCACT  
TCTGGGAGGTGAGCAGAGGGAAGGCTTGGCCTTGATGATGCAGCTGGCCCGAGAGCTGAAGACCCTGGCCCGGGA  
CCTTGGCATGGCAGTGGTGGTGACCAACCACATAACTCGAGACAGGGACAGCGGGAGGCTCAAACCTGCCCTCGG  
ACGCTCCTGGAGCTTTGTGCCCAGCACTCGGATTCTCCTGGACACCATCGAGGGAGCAGGAGCATCAGGCGGCCG  
GCGCATGGCGTGTCTGGCCAAATCTTCCCGACAGCCAACAGGTTTCCAGGAGATGGTAGACATTGGGACCTGGGG  
GACCTCAGAGCAGAGTGCCACATTACAGGGTGATCAGACATGACCTGTGCTGTTGTTTGGGAAACAGGGAAGCAT  
TGGGGACCCCTCCCAACTTTCTTCCAGTAACGCCTGCTGTTTACTGCCACCTGGCACTGGTGACTACAGACGT  
TCTCAGGCTGGCCAGAAGAGACATCTTGGGTTCCTTGGCCTCACTCTCTGTAAGCATATAAACCACAGGCGAAAG  
AGGATGCTGCATTGCGAGGACCCAGAAATTCATACTGGTGCCACGTTTCCCTTCCCTTATTTCTAACGTGTATGTT  
TCTGGTGGAAACCAAGTTCACCCTGGCTGGGAGCATCTCTGATGAGGCATGCTGGCGACTGGATGGATAATCCTG  
TGCATCACCATTGTGTCTGTGCTCCCTCCTAGCGCAGTGGCCAAGCCGGGAAAGCCTCTAACTTGCCTTTGCTG  
CTGCTGCCCTTTTTTTCTTTGTCTCTGCCCTTCCATTTGTTAGATGGGGGCCCACTCTTCCTTAGCTCTGTCTC  
TGAGTTACTGGGTGGAAATAAGCTTATAAATGAAATACTCTCTTCATCTCTGTTTGTCTTTAAAAATATAAAA  
AGGCAATTCCCGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4785**

MGVLRVGLCPGLTEEMIQLLRSHRIKTVVDLVSADLEEVAQKCGLSYKALVALRRVLLAQFSAFPVNGADLHEEL  
KTSTAILSTGIGSLDKLLDAGLYTGEVTEIVGGPGSGKTQVCLCMAANVAHGLQQNVLYVDSNGGLTASRLQLL  
QAKTQDEEEQAEALRRIQVVHAFDIFQMLDVLQELRGTVAAQVVGSSGTVKVVVDSVTAVVSPLLGGQOREGLA  
LMMQLARELKTLARDLGMAVVVTNHITRDRDSGRLKPALGRSWSFVPSTRILLDTIEGAGASGGRRMACLAKSSR  
QPTGFQEMVDIGTWGTSEQSATLQGDQT

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**FIGURE 4786**

CTGGAACCCGGAAGCGGCAGCGCGGCGGACCCGGCGGGCGGGCTCTGGGCGCGGGAATCCCGGCGGATCCCGGG  
CGGGCGGATGACCCCCAGCCCTACCCTTGGTGCCGCCCTCCTCTCTCTCCTTTCTCCTCCGGCAGCCAGCGCGCC  
TGTGTCTCTCTAGGAAGGGGTAGGGGAGGGGCGTCTGGAGAGGACCCCCGCGAATGCCACGTGACGTGCAGT  
CCCCCTGGGGCTGTTCGGCCTGCGGGGAACATGGGCGTGCTCAGGGTCGGAAGTGTGCCCTGGCCTTACCGAGGA  
GATGATCCAGCTTCTCAGGAGCCACAGGATCAAGACAGTGGTGGACCTGGTTTCTGCAGACCTGGAAGAGGTAGC  
TCAGAAATGTGGCTTGTCTTACAAGTCTTGATAAACTGCTTGATGCTGGTCTCTATACTGGAGAAGTGAAGTAAA  
TTGTAGGAGGCCAGGTAGCGGCAAACTCAGGTATGTCTCTGTATGGCAGCAAATGTGGCCCATGGCCTGCAGC  
AAAACGTCCTATATGTAGATTCCAATGGAGGGCTGACAGCTTCCCGCCTCCTCCAGCTGCTTCAGGCTAAAACCC  
AGGATGAGGAGGAACAGGCAGAAGCTCTCCGGAGGATCCAGGTGGTGCATGCATTTGACATCTCCAGATGCTGG  
ATGTGCTGCAGGAGCTCCGAGGCACTGTGGCCAGCAGGTGACTGGTTCTTCAGGAAGTGTGAAGGTGGTGGTTG  
TGGACTCGGTCACTGCGGTGGTTTCCCCACTTCTGGGAGGTCAGCAGAGGGAAGGCTTGGCCTTGATGATGCAGC  
TGGCCCGAGAGCTGAAGACCTGGCCCGGGACCTTGGCATGGCAGTGGTGGTGACCAACCACATAACTCGAGACA  
GGGACAGCGGGAGGCTCAAACCTGCCCTCGGACGCTCCTGGAGCTTTGTGCCAGCACTCGGATTCTCCTGGACA  
CCATCGAGGGAGCAGGAGCATCAGGCGGCCGCGCATGGCGTGTCTGGCCAAATCTTCCCGACAGCCAACAGGTT  
TCCAGGAGATGGTAGACATTGGGACCTGGGGGACCTCAGAGCAGAGTGCCACATTACAGGGTGATCAGACATGAC  
CTGTGCTGTTGTTTGGGAAACAGGGAAGCATTGGGGACCCCTCCCACTTTTCTTCCAGTAACGCCTGCTGTTT  
ACTGCCACCTGGCACTGGTGACTACAGACGTTCTCAGGCTGGCCAGAAGAGACATCTTGGGTTCTTGGCCTCAC  
TCTCTGTAAGCATATAAACCACAGGCGAAAGAGGATGCTGCATTGCGAGGACCCAGAAATTCATACTGGTGCCAC  
GTTTCCTTCCCTTATTTCTAACGTGTATGTTTCTGGTGGAAACCAAGTTCACCCTGGCTGGGAGCATCTCTGATG  
AGGCATGCTGGCGACTGGATGGATAATCCTGTGCATCACCATTGTGTCTGTGCTCCCTCCTAGCGCAGTGGCCA  
AGCCGGGAAAGCCTCTAACTTGCCTTTGCTGCTGCTGCCTTTTTTTTCTTTGTCTCTGCCTTCCATTTGTTAG  
ATGGGGGCCCCACTCTTCCTTAGCTCTGTCTCTGAGTTACTGGGTGGAAATAAGCTTATAAATGAAATACTCTTCT  
TCATCTCTGTTTTGCTCTTAAAAATATAAAAAGGCAATTCCCCG

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**FIGURE 4787**

MGVLRVGLCPGLTEEMIQLLRSHRIKTVVDLVSADLEEVAQKCGLSYKS

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**FIGURE 4788**

CTGGAACCCGGAAGCGGCAGCGCGGCGCGACCCGGCGGGCGGGCTCTGGGCGCGGGAATCCCGGCGGATCCCGGG  
CGGGCGGATGACCCCCAGCCCTACCCTTGGTGCCGCTCCTCCTCTCTCCTTTCTCCTCCGGCAGCCAGCGCGCC  
TGTGTCTCTCTAGGAAGGGGTAGGGGAGGGGCGTCTGGAGAGGACCCCCGGAATGCCACGTGACGTGCAGT  
CCCCCTGGGGCTGTTCGGCCTGCGGGGAACATCGGCGTGCTCAGGGTCGGACTGTGCCCTGGCCTTACCGAGGA  
GATGATCCAGCTTCTCAGGAGCCACAGGATCAAGACAGTGGTGGACCTGGTTTCTGCAGACCTGGAAGAGGTAGC  
TCAGAAATGTGGCTTGTCTTACAAGTCTTGATAAACTGCTTGATGCTGGTCTCTATACTGGAGAAGTGAAGTAAA  
TTGTAGGAGGCCAGGTAGCGGCAAACTCAGGCAGAAGCTCTCCGGAGGATCCAGGTGGTGCATGCATTTGACA  
TCTTCCAGATGCTGGATGTGCTGCAGGAGCTCCGAGGCACGTGGGCCAGCAGGTGACTGGTTCTTCAGGAAGT  
TGAAGGTGGTGGTTGTGGACTCGGTCACTGCGGTGGTTTCCCCACTTCTGGGAGGTGAGCAGAGGGAAGGCTTGG  
CCTTGATGATGCAGCTGGCCCCGAGAGCTGAAGACCTGGCCCGGGACCTTGGCATGGCAGTGGTGGTGACCAACC  
ACATAACTCGAGACAGGGACAGCGGGAGGCTCAAACCTGCCCTCGGACGCTCCTGGAGCTTTGTGCCAGCACTC  
GGATTCTCCTGGACACCATCGAGGGAGCAGGAGCATCAGGCGGCCGGCGCATGGCGTGTCTGGCCAAATCTTCCC  
GACAGCCAACAGGTTTCCAGGAGATGGTAGACATTGGGACCTGGGGGACCTCAGAGCAGAGTGCCACATTACAGG  
GTGATCAGACATGACCTGTGCTGTTGTTTGGGAAACAGGGAAGCATTGGGGACCCCTCCCAACTTTTCTTCCCAG  
TAACGCCTGCTGTTTACTGCCACCTGGCACTGGTGAAGTACAGACGTTCTCAGGCTGGCCAGAAGAGACATCTTGG  
GTTTCTTGGCCTCACTCTCTGTAAGCATATAAACCACAGGCGAAAGAGGATGCTGCATTGCGAGGACCCAGAAAT  
TCATACTGGTGCCACGTTTCCCTTCCCTTATTCTAACGTGTATGTTTCTGGTGAAACCAAGTTCACCTTGGCTG  
GGAGCATCTCTGATGAGGCATGCTGGCGACTGGATGGATAATCCTGTGCATCACCATTGTGTCTGTGCTCCCTC  
CTAGCGCAGTGGCCAAGCCGGGAAAGCCTCTAACTTGCCTTTGCTGCTGCTGCTTTTTTTTCTTTTGTCTCTGC  
CTTTCCATTTGTTAGATGGGGGCCCACTCTCCTTAGCTCTGTCTCTGAGTTACTGGGTGGAAATAAGCTTATAA  
ATGAAATACTCTTCTTCATCTCTGTTTTGCTCTTAAAAATATAAAAAGGCAATTCCCCG

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**FIGURE 4789**

MGVLRVGLCPGLTEEMIQLLRSHRIKTVVDLVSADLEEVAQKCGLSYKS

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**FIGURE 4790**

CTGGAACCCGGAAGCGGCAGCGCGGCGCGACCCGGCGGGCGGGCTCTGGGCGCGGGAATCCCGGCGGATCCCGGG  
CGGGCGGATGACCCCCAGCCCTACCCTTGGTGCCGCCTCCTCCTCTCTCCTTTCTCCTCCGGCAGCCAGCGCGCC  
TGTGTCCTCTCTAGGAAGGGGTAGGGGAGGGGCGTCTGGAGAGGACCCCCGCGAATGCCACGTGACGTGCAGT  
CCCCCTGGGGCTGTTCCGGCCTGCGGGGAACATCGGGCGTGTCTAGGGTTCGGACTGTGCCCTGGCCTTACCGAGGA  
GATGATCCAGCTTCTCAGGAGCCACAGGATCAAGACAGTGGTGGACCTGGTTTCTGCAGACCTGGAAGAGGTAGC  
TCAGAAATGTGGCTTGTCTTACAAGGCAGAAGCTCTCCGGAGGATCCAGGTGGTGCATGCATTTGACATCTTCCA  
GATGCTGGATGTGCTGCAGGAGCTCCGAGGCACTGTGGCCAGCAGGTGACTGGTTCTTCAGGAACTGTGAAGGT  
GGTGGTTGTGGACTCGGTCACTGCGGTGGTTTCCCCACTTCTGGGAGGTGAGCAGAGGGAAGGCTTGGCCTTGAT  
GATGCAGCTGGCCCGAGAGCTGAAGACCCTGGCCCGGGACCTTGGCATGGCAGTGGTGGTGACCAACCACATAAC  
TCGAGACAGGGACAGCGGGAGGCTCAAACCTGCCCTCGGACGCTCCTGGAGCTTTGTGCCCAGCACTCGGATTCT  
CCTGGACACCATCGAGGGAGCAGGAGCATCAGGCGGCCGGCGCATGGCGTGTCTGGCCAAATCTTCCCGACAGCC  
AACAGGTTTCCAGGAGATGGTAGACATTGGGACCTGGGGGACCTCAGAGCAGAGTGCCACATTACAGGGTGATCA  
GACATGACCTGTGCTGTGTTTGGGAAACAGGGAAGCATTGGGGACCCCTCCCAACTTTTCTTCCCAGTAACGCC  
TGCTGTTTACTGCCACCTGGCACTGGTGACTACAGACGTTCTCAGGCTGGCCAGAAGAGACATCTGGGTTTCCTT  
GGCCTCACTCTCTGTAAGCATATAAACCACAGGCGAAAGAGGATGCTGCATTGCGAGGACCCAGAAATTCATACT  
GGTGCCACGTTTCTTCCCTTATTTCTAACGTGTATGTTTCTGGTGGAACCAAGTTCACCCTGGCTGGGAGCAT  
CTCTGATGAGGCATGCTGGCGACTGGATGGATAATCCTGTGCATCACCATTGTGTCCTGTGCTCCCTCCTAGCGC  
AGTGGCCAAGCCGGGAAAGCCTCTAACTTGCCCTTGTGCTGCTGCCTTTTTTTCTTTTGTCTCTGCCTTTCCA  
TTTGTTAGATGGGGGCCACTCTTCCTTAGCTCTGTCTCTGAGTTACTGGGTGGAAATAAGCTTATAAATGAAAT  
ACTCTTCTTCATCTCTGTTTGTCTTTAAAAATATAAAAAGGCAATTCCCCG

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**FIGURE 4791**

MGVLRVGLCPGLTEEMIQLLRSHRIKTVVDLVSADLEEVAQKCGLSYKAEALRRIQVVHAFDIFQMLDVLQELRG  
TVAQQVTGSSGTVKVVVDSVTAVVSPLLGGQQREGLALMMQLARELKTLDLGMVAVVTNHITRDRDSGRLKP  
ALGRSWSFVPSTRILLDTIEGAGASGGRRMACLAKSSRQPTGFQEMVDIGTWGTSEQSATLQGDQT

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**FIGURE 4792**

GTGGGGACGCAGGATGGCGGCAGCAGTGGCGGACGAGGCGGTGGCGCGCATGTGCAGCGGTTGCTAGTGCAGTT  
CCAGGATGAGGGCGGGCAGCTGCTGGGTTCCCGTTTCGACGTGCCGTGGACATCACCCGGACAGGCTGCAGCT  
CGTGTGCAACGCGCTACTGGCCCAGGAGGATCCCCTGCCACTGGCTTTCTTTGTCCACGATGCTGAGATCGTCTC  
CTCACTGGGGAAGACGTTGGAGTCCAGGCAGTGGAGACAGAGAAGGTCCTAGACATCATCTACCAGCCACAGGC  
TATCTTCAGAGTCCGGGCTGTGACTCGCTGCACCAGCTCCTTGGAGGGTCACAGTGAGGCAGTCATTTCTGTGGC  
CTTCAGCCCTACGGGAAAGTACCTGGCCAGTGGCTCTGGAGACACCACCGTGCCTTCTGGGATCTCAGCACAGA  
GACACCACATTTACATGCAAGGGACACAGACACTGGGTCTTAGTATATCTGGTCTCCAGATGGCAAGAAGCT  
GGCCTCAGGCTGCAAGAATGGCCAGATTCTCTCTGGGACCCAAAGCACAGGGAAGCAGGTGGGCAGGACCCTCGC  
TGGCCACAGCAAGTGGATCACAGGCCTGAGCTGGGAGCCCTCCATGCCAACCCTGAGTGGCGCTATGTGGCCAG  
CAGCTCCAAGGATGGCAGTGTGCGGATCTGGGACACAACCTGCAGGCCGCTGTGAGCGCATCTCACCGGGCACAC  
CCAGTCGGTCACCTGTCTCCGGTGGGGAGGGGACGGGCTTCTCTACTCTGCCTCCAGGACCGCACCATCAAAGT  
CTGGAGAGCTCATGACGGTGTGCTGTGCCGACTCTGCAAGGCCACGGCCACTGGGTGAACACCATGGCCCTCAG  
CACTGACTATGCCCTGCGCACTGGGGCCTTTGAACCTGTGAGGCCTCAGTTAATCCCCAAGACCTCCAAGGATC  
CTTGACAGAGTTGAAGGAGAGGGCTCTGAGCCGATAACAACCTCGTGGGGGCCAGGGTCCAGAGAGGCTGGTGTG  
TGGCTCCGACGACTTCACCTTATTCTGTGGTCCCCAGCAGAGGACAAAAAGCCTCTCACTCGGATGACAGGACA  
CCAAGCTCTCATCAACCAGGTGCTCTTCTCTCTGACTCCCGCATCGTGGCTAGTGCCTCCTTTGACAAGTCCAT  
CAAGCTGTGGGATGGCAGGACGGGCAAGTACCTGGCTTCCCTACGCGGCCACGTGGCTGCCGTGTACCAGATTGC  
GTGGTCAGCTGACAGTCGGCTCCTGGTCAGCGGCAGCAGTGACAGCACACTGAAGGTGTGGGATGTGAAGGCCCA  
GAAGCTGGCCATGGACCTGCCCGGCCACGCGGATGAGGTATATGCTGTTGACTGGAGTCCAGATGGCCAGAGAGT  
GGCAAGTGGTGGGAAGGACAAATGCCTCCGGATATGGAGGAGATGAGACGGCCCGAAGTTCTCTTGACCCCCAC  
CTCGACTCGGCCTCTGCCAGCTGCCTTCCCTGCCAGAGAACAAAGGCTGAGATGGCAGTGACACACCCTCCCCA  
CCAGTGGGGACCTGAGAATGCGTGTGGCTGCTGTCTCGATAGACCGGAATGGGGTTTTCCACAGATCCCCGC  
CTGTGGCACACCCCAGAGCCAGAAATCGAAGGTCACAGGAAGTTGTCACTGAACTTGGCCCGTGTCTGCTACTCT  
GTACCTTGCTGGTACAGACAGGGGTGGTGGGCAGCCAGGCTCTATGAGTGGGCCCCCTAGTGTGAGCTCTGTACAG  
GGTCAGATCCCAGGTTCTATGACCAAATAAGTAACCTAAGTTTTGTGTGTGGGTTCTAATTCCTTGTCTAGAA  
TCCCCATGACTCAATCAAGGACTGTGCTAAATGAGATTGTCCAGCCCCCGCCCTTGCACTGGACTACGCCAAAAC  
CACACTGACCAGGCACTTGCCCTTCCCTCTCTTCCCCCGTGTGGTAAGAGAGAGGGCCAGTTGTGATAGTGGCCAA  
GGAGAATCTAGGGCTGTATTGTTGTCCACTGCAGTAGGCACCGGCCACATGTGACTGCTGGCATGAAATAGAAGT  
GCAGTTCCTCCATCGCACTGGGTAAGGCCCTCCAGTATTGGACAGCACACAGAAAGGTTTTATCATCAAGAGAGT  
TCTGCTGGTCAGCCCTGCTCCAGGGGATGCCCTCTGCCCTTCGCATAGCACACTGCTTGAGGCCCTGCCAGGCACCA  
AGCACTGCCCTGGGCCCATGGGATAGAGCGGGGAAGGTGATGGCTCTTCCAGAGGATTCCCTCAGATGGGGAGGC  
AGCAGTATGAGCTCTGAGCAGAAGTGGGTATTGTTGATACAGAGGAAGTTCTTTGCCACGAGAAGTTTCAAGCAG  
TGAAAGGAATTTCCATCAGGACTCAGACCCAGGCCGAGATCTTGCCCTGAATGTACCCTGCCCTCTGCTTCTCC  
TGCACTCCCATGCTAAGCAGGGTCAAGGTCTGAAGTACTCAGATTGGATTTCCAAACCATCCTTGTATAAAGTGT  
CAGAACTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 4793**

MAAAVADEAVARDVQRLLVQFQDEGGQLLGSPFDVPVDITPDRLQLVCNALLAQEDPLPLAFFVHDAEIVSSLGK  
TLESQAVETEKVLDIIYQPQAIFRVRAVTRCTSSLEGHSEAVISVAFSPTGKYLASGSGDTTVRFWDLSTETPHF  
TCKGHRHWVLSISWSPDGKKLASGCKNGQILLWDPSTGKQVGRTLAGHSKWITGLSWEPLHANPECRYVASSSKD  
GSVRIWDTTAGRCERILTGHTQSVTCLRWGGDGLLYSASQDRTIKVWRAHDGVLCRTLQGHGHVNTMALSTDYA  
LRTGAFEPAEASVNPQDLQGSLLQELKERALSRYNLVRGQGERLVSGSDDFTLFLWSPAEDKKPLTRMTGHQALI  
NQVLFSPDSRIVASASFDSIKLWDGRTGKYLASLRGHVAAYVQIAWSADSRLLVSGSSDSTLKVWDVKAQKLAM  
DLPGHAEVYAVDWSPDGQRVASGGKDKCLRIWRR

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**FIGURE 4794A**

GTGCAGTGGCAGCATCTTGGTTCACCACAATCTCGTCTCGAAGGCTCAGGTGATTCTCTCACCTCAGCCGCTGA  
GTAGCTGGGACCACAGTTTTAGCTGTGAGTTCAACATGGAGGCAAATCAGTGCCCCCTGGTTGTGGAACCATCTT  
ACCCAGACCTGGTCATCAATGTAGGAGAAGTGACTCTTGGAGAAGAAAACAGAAAAAGCTGCAGAAAATTCAGA  
GAGACCAAGAGAAGGAGAGAGTTATGCGGGCTGCATGTGCTTTATTAACTCAGGAGGAGGAGTGATTGCAATGG  
CCAAGAAGGTTGAGCATCCCGTGGAGATGGGACTGGATTTAGAACAGTCTTTGAGAGAGCTTATTAGTCTTCAG  
ATCTGCAGGCTTTTCTTTGAGACCAAGCAACAAGGAAGGTGTTTTTACATTTTGTAAATCTTGGAGCAGTGGCC  
CTTTCCCTGAAGATCGCTCTGTCAAGCCCCGCTTTGCAGCCTCAGTTCTTCATTATACCGTAGATCTGAGACCT  
CTGTGCGTTCCATGGACTCAAGAGAGGCATTCTGTTTCTGAAGACCAAAAGGAAGCCAAAAATCTTGAAGAAG  
GACCTTTTCAAAAATTCACAAGGGTGTATACCAAGAGCTCCCTAACTCGGATCCTGCTGACCCAACTCGGATC  
CTGCTGACCTAATTTTCCAAAAAGACTATCTTGAATATGGTGAAATCCTGCCTTTTCTGAGTCTCAGTTAGTAG  
AGTTTAAACAGTTCTCTACAAAACACTTCCAAGAATATGTAAGGACAATTCCAGAATACGTCCTGCATTTG  
CAAACACTGGAGGAGGCTATCTTTTTATTGGAGTGGATGATAAGAGTAGGGAAGTCTGGGATGTGCAAAAGAAA  
ATGTTGACCTGACTCTTTGAGAAGGAAAATAGAACAGCCATATACAACTACCTGTGTTCATTTTGGCAAC  
CCCAACGCCCCGATAACCTTCACTCAAAATTGTGAATGTGTTAAAAAGGGGAGAGCTCTATGGCTATGCTTGCA  
TGATCAGAGTAAATCCCTTCTGCTGTGCAGTGTCTCAGAAGCTCCCAATTCATGGATAGTGGAGGACAAGTACG  
TCTGCAGCCTGACAACCGAGAAATGGGTAGGCATGATGACAGACACAGATCCAGATCTTCTACAGTTGTCTGAAG  
ATTTTGAATGTGAGTGTCTATCTAGTGGGCTCCCTTTAGCAGACCAAGTGTACTCCAAGAAAGGCTGGAAC  
ATAAAAAGGAATCCAGCAACTTTTATTTTCACTCCACCAGGATATTTGCGATATACTCCAGAGTCACTCTGGA  
GGGACCTGATCTCAGAGCACAGAGGACTAGAGGAGTTAATAAATAAGCAAATGCAACCTTTCTTTGGGGAATTT  
TGATCTTCTCTAGAAGTTGGGCTGTGGACCTGAACTTGCAAGGAGAAGCCAGGAGTCATCTGTGATGCTCTGTGA  
TAGCACAGAACAGCACCCCCATTCTCTACACCATCTCAGGGAGCAAGATGCAGAGGGCCAGGACTACTGCACTC  
GCACCGCTTTACTTTGAAGCAGAAGCTAGTGAACATGGGGGGCTACACCGGAAGGTGTGTGTGTCAGGGCCAAGG  
TCCTCTGCCTGAGTCTGAGAGCAGCGCAGAGGCTTGGAGGCTGCAGTGTCTCCGATGGATTACCTGCGTCCT  
ATAGCCTTGCAAGCACCCAGCACATGGAAGCCCTGCTGCAGTCCCTCGTGATTGTCTTACTCGGCTTCAGGTCTC  
TCTTGAGTGACCAGCTCGGCTGTGAGGTTTTAAATCTGCTCACAGCCAGCAGTATGAGATATTTCCAGAAGCC  
TCCGCAAGAACAGAGAGTTGTTTGTCCACGGCTTACCTGGCTCAGGGAAGACCATCATGGCCATGAAGATCATGG  
AGAAGATCAGGAATGTGTTTCACTGTGAGGCACACAGAATTCTCTACGTTTGTGAAAACCAGCCTCTGAGGAACT  
TTATCAGTGATAGAAATATCTGCCGAGCAGAGACCCGAAAACCTTCTTAAGAGAAAACCTTTGAACACATTCAAC  
ACATCGTCATTGACGAAGCTCAGAATTTCCGTACTGAAGATGGGACTGGTATGGGAAGGCAAAAAGCATCACTC  
GGAGAGCAAAAGGTTGGCCAGGAATTTCTTGATCTTTCTGGATTACTTTAGACCAGCCACTTGGATTGCAGTG  
GCCTCCCTCTCTCTCAGACCAATATCCAAGAGAAGAGCTCACCAGAATAGTTCGCAATGCAGATCCAATAGCCA  
AGTACTTACAAAAGAAATGCAAGTAATTAGAAGTAATCCTTCATTTAACATCCCACTGGGTGCCTCGAGGTAT  
TTCTTGAAGCCGAATGGTCCAGGGTGTTCAGGGAACCTTACGAATTAAGAAATACTTGACTGTGGAGCAAATAA  
TGACCTGTGTGGCAGACACGTGCAGGCGCTTCTTTGATAGGGGCTATTCTCAAAGGATGTTGCTGTGCTTGTCA  
GCACCGCAAAAGAAGTGGAGCACTATAAGTATGAGCTCTTGAAAGCAATGAGGAAGAAAAGGGTGGTGCAGCTCA  
GTGATGCATGTGATATGTTGGGTGATCACATTGTGTTGGACAGTGTTGCGCGATTCTCAGGCCTGGAAGGAGCA  
TAGTGTGTTGGGATCCATCCAAGGACAGCTGACCCAGCTATCTTACCCAATGTTCTGATCTGTCTGGCTTCCAGGG  
CAAAACAACACCTGTATATTTTCCGTGGGTGGCCATTAGGAAGAACTCCAAATCAAAATGCTATGTAAATGTC  
TATGGGTGACAGTCTGCTGATGGTAGAAACCTTTCTTTTTAGTTACAAAGTCAGAGATTGGACGGAGCTGACAC  
AAAGAGTTTGGAGCTCCCCATTTCTGGCTCTCCTTTTCAAGGGTTCCTTCCCCAACCTTTTCAAGCAGCGGTGGCT  
GCCCCCATTTCTGACCCCTGACTCTTCCAGCCAGAAAGATGGTGGTTTTCTAAAGGAACCTTTAGCTGTCTGTCAC  
AATGCCGATCTGTGTCTTGCAATTTGGGTAAAAGCCATAAAAAAAGAACTCAGCCTGTGGCCTTTCTTTCTTC  
CAAGGCTGGGCTTCTTTTTTAAGTGACTTCATGCAGTTTGTGTCTTTTAAAAATTTGTCCAGAAATCGTTTTCTG  
CAGAAGCATGGTCTGTTAGGAGCTTACTGGCCGTAGCAGAAGCAATTGTTTCTGAATTTTACATTTATCTTT  
GCTGTATTCAATTAGGGCTTGGAGAGTCCGAAGATAATTCACTGCTCAGATTAATAATTTTGTGAGGACAA  
AGAATACCGTTATGATTATTTAATCCTTTAAATTTGTGGTCTCCAGAGCTTGTCTCAGAATGGCCAGACCAAG  
CCTTAATTTGTGATAGTGAATATTAATGGTCACTTAAGGAGAAATATAGGCCAAGATGAAATGAACATAAACCT  
GTTTGCCTGGCTTTCAGTGAAGATGATATTAGAGACCAAAATCTGGTTCTGAAGGTGTGTATCAGCCCTAAGG

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**FIGURE 4794B**

TGAACCAGACTTGGGAAAGATTGTCTTTAAAAATCAATGAGTTTATGTTTTAACTTCTCAGCTTAGTTCTATGCA  
TTGCTCTATAACACACCTAGTTAAGTTTTATGTTATTCTTGAAGTGTGATTTTTTTCTATTTACTTTTCATGGTT  
TGGTGGGCCATTGTTATGGACTGAATGTTTGTGTCCACCCTTCACCCCCAAATTCCCGTGTGAAGCCCCAACC  
TGCACTGTGGAGCTGGGGCTGCTAAGGAAGTAATTAAGGTTACATGAAGTCATGGTGGGGCTCTGATCTGCTAAG  
GTTGGTGTCTTATAGGGAGAGACCCAGAGAGCTTGTTCCTCCCTCCCTGTGCATGCAAACAAGAGGGCATGG  
GAGCACACAGAGAGATGGCAGCCACCTACAAGCCAAGAGGAGAAGCCTCACAATCAAACCTCTCGCTGCTGGCGAG  
AGTCTTGGACTCTGTCTTGGACTTCCAGCCTCCAGACTGTGAGAAACAAATTTCTGTTGTTTCAGCTTCTCAGTC  
TCTGGTGTCTTGTATTGTCAGCCTGAGAACACAGCTGTACGATTATTTGTCAAACAGAAAACACTGATACTTAAC  
AATGCTAATGCAATTATTTATTTGCTTTTCAGTCTCTACAAAACGTTCTAAAACACTAATCTAAATATTAACAGT  
AAAATATTTGCATAACTAATGGAACTAAGAAATCATATGACCAATATTTCACTTATTGGTAATCTTACTCTACT  
GATTTCCCCCAGACTGTGATTTTTGAACTTCCTTGCCTTTCTCCTGTCTTTCTGTGTTTATTCATGGAATTCCA  
GTTATCTGGGCTTGAAATTGCAGGCTCTCCTAACTTAAGCAAAATCTGACAGATCAGCAAAATGAGATAAATGTT  
TCTTTTTTCTTTCTGACTGCATTAAATCAGATACAACCTCAGCATTAAAAAGCTATCTTTGTAAATGTTGTTACTA  
ATAAATTAGTCTTATAAGATCCCTGGACTTTGGAGTTGTTGCAATGTCTTTGAGAGTAATCTTTAAAAGTCTAA  
TTTCGACTGGTTGTATCTCTTTATGATTTATTGCCCCACTAACAATATTTGAAACAATATAATATTTTAAAATGT  
ATAAATAATTATGAATTTTTGTTTAGAACAAAGAGGATTACTGATATTTGTTTCCCTATGAATGGCAAAAGGTTT  
AGCTTACTACTGCATTTCTGTTTTAAATAAAAAGTTGAGAGTTGTGTCTCATTAAACTG

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**FIGURE 4795**

MEANQCPLVVEPSYPDLVINVGCVTLGEENRKKLQKIQRDQEKERVMAACALLNSGGGVIRMAKKVEHPVEMGL  
DLEQSLRELIQSSDLQAFFETKQQGRCFYIFVKSWSGGPFPEDRSVKPRCLSLSSSLYRRSETSVRSMDSREAF  
FLKTKRKP KILEEGPFHKIHKGVYQELPNSDPADPNSDPADLIFQKDYLEYGEILPFPESQLVEFKQFSTKHQF  
YVKRTIPEYVPAFANTGGGYLFIGVDDKSREVLGC AKENVDPSLRRKIEQAIYKLP CVHFCQPQRPI TFTLKIV  
NVLKRGELYGYACMIRVNPFCCAVFSEAPNSWIVEDKYVCSLTTEKWVGMMTDTPDLLQLSEDFECQLSLSSGP  
PLSRPVYSKKGLEHKKELQQLLFSVPPGYLRYTPESLWRDLISEHRGLEELINKMQPFFRGILIFSRSWAVDLN  
LQEKPGVICDALLIAQNSTPILYITILREQDAEGQDYCTRTAFTLKQKLVNMGGYTGKVCVRKVLCLSPESAE  
LEAAVSPMDYPASYSLAGTQHMEALLQSLVIVLLGFRSLLSDQLGCEVLNLLTAQQYEIFSRSLRKNRELFVHGL  
PGSGKTIMAMKIMEKIRNVFHCEAHRILYVCENQPLRNFISDRNICRAETRKTFLRENFEHIQHIVIDEAQNFRT  
EDGDWYGKAKSITRRAKGGPGILWIFLDYFQTSHLDCSGLPPLSDQYPREELTRIVRNADPIAKYLQKEMQVIRS  
NPSFNIPTGCLEVFPEAEWSQGVQGT LRIKKYLTVEQIMTCVADTCRRFFDRGYSPKDVAVLVSTAKEVEHYKYE  
LLKAMRKR RVVQLSDACDMLGDHIVLDSVRRFSGLERSIVFGIHPRTADPAILPNVLICLASRAKQHLYIFPWGG  
H

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**FIGURE 4796A**

AATTCTCGAGCTCGTGCACCGGTGACGAGCTCGAGGGTGCACGAGCTCGAGGGCGCGCGCCCGGCCCCACCC  
TCGCAGACCCCCGCGCCCCGCGCCCTCCAGCCGGGTCCAGCCGGAGCCATGGGGCCGGAGCCGAGTGCACCC  
**ATG**GAGCTGGCGGCCTTGTGCCGCTGGGGGCTCCTCCTCGCCCTCTTGCCCCCGAGCCGCGAGCACCCAAGTG  
TGACCCGGCACAGACATGAAGCTGCGGCTCCCTGCCAGTCCCAGACCCACCTGGACATGCTCCGCCACCTCTAC  
CAGGGCTGCCAGGTGGTGCAGGGAAACCTGGAACCTACCTACCTGCCACCAATGCCAGCCTGTCCTTCTGCAG  
GATATCCAGGAGGTGCAGGGCTACGTGCTCATCGCTCACAACCAAGTGAGGCAGGTCCCACTGCAGAGGCTGCGG  
ATTGTGCGAGGCACCCAGCTCCTTGAGGACAATATGCCCTGGCCGTGCTAGACAATGGAGACCCGCTGAACAAT  
ACCACCCCTGTGCAGGGGCTCCCCAGGAGGCTGCGGGAGCTGCAGCTTCGAAGCCTCACAGAGATCTTGAAA  
GGAGGGGTCTTGATCCAGCGGAACCCCACTCTGCTACCAGGACACGATTTTGTGGAAGGACATCTTCCACAAG  
AACAACCAGCTGGCTCTCACACTGATAGACACCAACCGCTCTCGGGCTGCCACCCCTGTTCTCCGATGTGTAAG  
GGCTCCCGCTGCTGGGGAGAGAGTTCTGAGGATTGTGAGAGCCTGACGCGCACTGTCTGTGCCGGTGGCTGTGCC  
CGCTGCAAGGGGCCACTGCCCCTGACTGCTGCCATGAGCAGTGTGCTGCCGGCTGCACGGGCCCCAAGCACTCT  
GACTGCTGGCTGCTCCACTTCAACCACAGTGGCATCTGTGAGCTGCACTGCCAGCCCTGGTCACTACAAC  
ACAGACACGTTTGTAGTCCATGCCAATCCCGAGGGCCGGTATACATTCGGCGCCAGCTGTGTGACTGCCTGTCCC  
TACAACCTACCTTTCTACGGACGTGGGATCCTGCACCCTCGTCTGCCCCCTGCACAACCAAGAGGTGACAGCAGAG  
GATGGAACACAGCGGTGTGAGAAGTGCAGCAAGCCCTGTGCCCGAGTGTGCTATGGTCTGGGCATGGAGCACTTG  
CGAGAGGTGAGGGCAGTTACCACTGCCAATATCCAGGAGTTTGCTGGCTGCAAGAAGATCTTTGGGAGCCTGGCA  
TTTCTGCCGGAGAGCTTTGATGGGGACCCAGCCTCCAACACTGCCCCGCTCCAGCCAGAGCAGCTCCAAGTGTTC  
GAGACTCTGGAAGAGATCACAGTTACCTATACATCTCAGCATGGCCGGACAGCCTGCCTGACCTCAGCGTCTTC  
CAGAACCTGCAAGTAATCCGGGGACGAATCTGCACAATGGCGCCTACTCGCTGACCCCTGCAAGGGCTGGGCATC  
AGCTGGCTGGGGCTGCGCTCACTGAGGGAACCTGGGCAGTGGACTGGCCCTCATCCACCATAACACCCACCTCTGC  
TTCGTGCACACGGTGCCCTGGGACCAGCTCTTTTCGGAACCCGCACCAAGCTCTGCTCCACACTGCCAACCGGCCA  
GAGGACGAGTGTGTGGGCGAGGGCCTGGCCTGCCACCAGCTGTGCGCCCGAGGGCACTGCTGGGGTCCAGGGCCC  
ACCCAGTGTGTCAACTGCAGCCAGTTCTTTCGGGGCCAGGAGTGCCTGGAGGAATGCCGAGTACTGCAGGGGCTC  
CCCAGGGAGTATGTGAATGCCAGGCACTGTTTGGCGTGCCACCCTGAGTGTGAGCCCCAGAATGGCTCAGTGACC  
TGTTTTGGACCGGAGGCTGACCAGTGTGTGGCCTGTGCCACTATAAGGACCCTCCCTTCTGCGTGGCCCGCTGC  
CCCAGCGGTGTGAAACCTGACCTCTCCTACATGCCATCTGGAAGTTTCCAGATGAGGAGGGCGCATGCCAGCCT  
TGCCCCATCAACTGCACCCACTCTGTGTGGACCTGGATGACAAGGGCTGCCCCGCCGAGCAGAGAGCCAGCCCT  
CTGACGTCCATCTCTGCGGTGTTGGCATTCTGCTGGTCTGTTCTTGGGGGTGGTCTTTGGGATCCCTCATC  
AAGCGACGGCAGCAGAAGATCCGGAAGTACACGATGCGGAGACTGCTGCAGGAAACGGAGCTGGTGGAGCCGCTG  
ACACCTAGCGGAGCGATGCCAACCAGGCGCAGATGCGGATCCTGAAAGAGACGGAGCTGAGGAAGGTGAAGGTG  
CTTGGATCTGGCGCTTTTGGCACAGTCTACAAGGGCATCTGGATCCCTGATGGGGAGAATGTGAAAATTCCAGTG  
GCCATCAAAGTGTGTAGGGGAAAACACATCCCCCAAGCCAACAAAGAAATCTTAGACGAAGCATACTGATGGCT  
GGTGTGGGCTCCCCATATGTCTCCCGCCTTCTGGGCATCTGCCTGACATCCACGGTGCAGCTGGTGACACAGCTT  
ATGCCCTATGGCTGCCTCTTAGACCATGTCCGGGAAAACCGCGGACGCTGGGGCTCCCAGGACCTGCTGAACTGG  
TGATATGCAGATTGCCAAGGGGATGAGCTACCTGGAGGATGTGCGGCTCGTACACAGGGACTTGGCCGCTCGGAAC  
GTGCTGGTCAAGAGTCCCAACCATGTCAAAATTACAGACTTCGGGGCTGGCTCGGCTGCTGGACATTGACGAGACA  
GAGTACCATGCAGATGGGGGCAAGGTGCCCATCAAGTGGATGGCGCTGGAGTCCATTCTCCGCCGGCGGTTACC  
CACCAGAGTGATGTGTGGAGTTATGGTGTGACTGTGTGGGAGCTGATGACTTTTGGGGCCAAACCTTACGATGGG  
ATCCCAGCCCGGAGATCCCTGACCTGCTGGAAGGGGGAGCGGCTGCCCCAGCCCCCATCTGCACCATTGAT  
GTCTACATGATCATGGTCAAATGTTGGATGATTGACTCTGAATGTGCGCCAAGATTCCGGGAGTTGGTGTCTGAA  
TTCTCCCGCATGCCCAGGGACCCCCAGCGCTTTGTGGTCTATCCAGAATGAGGACTTGGGGCCAGCCAGTCCCTTG  
GACAGCACCTTCTACCGCTCACTGCTGGAGGACGATGACATGGGGGACCTGGTGGATGCTGAGGAGTATCTGGTA  
CCCCAGCAGGGCTTCTTCTGTCCAGACCCTGCCCCGGGCGCTGGGGGCGATGGTCCACCACAGGACCCGAGCTCA  
TCTACCAGGAGTGGCGGTGGGGACCTGACACTAGGGCTGGAGCCCTCTGAAGAGGAGGGCCCCAGGTCTCCACTG  
GCACCCCTCCGAAGGGGCTGGCTCCGATGTATTTGATGGTGACCTGGGAATGGGGGCGAGCCAAGGGGCTGCAAGC  
CTCCCCACACATGACCCAGCCCTCTACAGCGGTACAGTGAGGACCCACAGTACCCCTGCCCTCTGAGACTGAT  
GGCTACGTTGCCCCCTGACCTGCAGCCCCCAGCCTGAATATGTGAACCAGCCAGATGTTGCGCCCCAGCCCCCT

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**FIGURE 4796B**

TCGCCCCGAGAGGGCCCTCTGCCTGCTGCCCCGACCTGCTGGTGCCACTCTGGAAAGGGCCAAGACTCTCTCCCCA  
GGGAAGAATGGGGTCGTCAAAGACGTTTTTGCCTTTGGGGGTGCCGTGGAGAACCCCGAGTACTTGACACCCAG  
GGAGGAGCTGCCCTCAGCCCCACCCTCCTCCTGCCTTCAGCCCAGCCTTCGACAACCTCTATTACTGGGACCAG  
GACCCACCAGAGCGGGGGCTCCACCCAGCACCTTCAAAGGGACACCTACGGCAGAGAACCAGAGTACCTGGGT  
CTGGACGTGCCAGTGTGAACCAGAAGGCCAAGTCCGCAGAAGCCCTGATGTGTCTCAGGGAGCAGGGAAGGCCT  
GACTTCTGCTGGCATCAAGAGGTGGGAGGGCCCTCCGACCACTTCCAGGGGAACCTGCCATGCCAGGAACCTGTC  
CTAAGGAACCTTCCTTCCTGCTTGAGTTCCCAGATGGCTGGAAGGGGTCCAGCCTCGTTGGAAGAGGAACAGCAC  
TGGGGAGTCTTTGTGGATTCTGAGGCCCTGCCCAATGAGACTCTAGGGTCCAGTGGATGCCACAGCCCAGCTTGG  
CCCTTTCCTTCCAGATCCTGGGTACTGAAAGCCTTAGGGAAGCTGGCCTGAGAGGGGAAGCGGCCCTAAGGGAGT  
GTCTAAGAACAAAAGCGACCCATTTCAGAGACTGTCCCTGAAACCTAGTACTGCCCCCATGAGGAAGGAACAGCA  
ATGGTGTCTAGTATCCAGGCTTTGTACAGAGTGTCTTTCTGTTTAGTTTTACTTTTTTTGTTTTGTTTTTTAAA  
GACGAAATAAAGACCCAGGGGAGAATGGGTGTTGTATGGGGAGGCAAGTGTGGGGGTCTTCTCCACACCCACT  
TTGTCCATTGCAAATATATTTTGAAAAC

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**FIGURE 4797**

MELAALCRWGLLLALLPPGAASTQVCTGTDMLRLPASPETHLDMLRHLYQGCQVVQGNLELTYPNALSFLQ  
DIQEVQGYVLIAHNQVRQVPLQRLRIVRGTOQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLRSLTEILK  
GGVLIQRNPQLCYQDTILWKDIFHKNNQLALTIDTNRSRACHPCSPMCKGSRWGESSEDCQSLTRTVCAGGCA  
RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLFHNSGICELHCPALVTYNTDTFESMPNPEGRTYTFGASCVTACP  
YNYLSTDVGSCTLVCPHNOEVTAEEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA  
FLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPLDSVFNQLQVIRGRILHNGAYSLTLQGLGI  
SWLGLRSLRELGSGLALIHNNHLCFVHTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGP  
TQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQFQNGSVTCFGPEADQCVACAHYKDPFPCVARC  
PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCFAEQRASPLTSIVSAVVGILLVVVLGVVFGILI  
KRRQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTIVYKGIWIPDGENVKIPV  
AIKVLRENTSPKANKEILDEAYVMAGVGSPIVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRRGLGSQDLLNW  
CMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEHADGGKVPKWMALLESILRRRFT  
HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVE  
FSRMARDPQRFVVIQNEGLGPASPLDSTFYRSLLEDDDMGDLVDAEYLVPPQGGFFCPDPAPGAGGMVHHRHRS  
STRSGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAGLQSLPTHDPSPQLQRYSEDPTVPLPSETD  
GYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPO  
GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV

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**FIGURE 4798**

CTTTCCTTTCGCTGCTGCGGCCGCAGCCATGAGTATGCTCAGGCTTCAGAAGAGGCTCGCCTCTAGTGTCTCCG  
CTGTGGCAAGAAGAAGGTCTGGTTAGACCCCAATGAGACCAATGAAATCGCCAATGCCAACTCCCGTCAGCAGAT  
CCGGAAGCTCATCAAAGATGGGCTGATCATCCGCAAGCCTGTGACGGTCCATTCCCGGGCTCGATGCCGGAAAAA  
CACCTTGGCCCGCCGGAAGGGCAGGCACATGGGCATAGGTAAAGCGGAAGGGTACAGCCAATGCCGAATGCCAGA  
GAAGGTCACATGGATGAGGAGAATGAGGATTTTGCGCCGGCTGCTCAGAAGATACCGTGAATCTAAGAAGATCGA  
TCGCCACATGTATCACAGCCTGTACCTGAAGGTGAAGGGGAATGTGTTCAAAAACAAGCGGATTCTCATGGAACA  
CATCCACAAGCTGAAGGCAGACAAGGCCCGCAAGAAGCTCCTGGCTGACCAGGCTGAGGCCCGCAGGTCTAAGAC  
CAAGGAAGCACGCAAGCGCCGTGAAGAGCGCCTCCAGGCCAAGAAGGAGGAGATCATCAAGACTTTATCCAAGGA  
GGAAGAGACCAAGAAATTAAAACCTCCCACTTTGTCTGTACATACTGGCCTCTGTGATTACATAGATCAGCCATTA  
AAATAAAACAAGCCTTAATCTGC



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**FIGURE 4799**

MSMLRLQKRLASSVLRGKKKVWLDNETNEIANANSRQQIRKLIKDGLIIRKPVTVHSRARCRCNTLARRKGRH  
MGIGKRKGTANARMPEKVTWMRRMRILRRLRRYRESKKIDRHMYHSLYLKVGNVFKNKRILMEHIHKLKADKA  
RKKLLADQAEARRSKTKEARKRREERLQAKKEEIIKTLKSKEETKK

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**FIGURE 4800A**

AGCTCCAGCCGCGCTCGCTGCTGCTGTGTAGTTGCAGCCGCGGCGCCTCCCGCCAGCTCGCCTCGGGGAACAG  
GACGCGGTGAGCTCCAGGCGXTCCCGCCCCAGCTTTTCTCGGAACCATGAACCCCACTGCGCCCGGTGCGGC  
AAGATCGTGTATCCACGGAGAAGGTGAACGTCTGTGATAAGTTCTGGCATAAAGCATGCTTCCATTGCGAGACC  
TGCAAGATGACACTGAACATGAAGAAGTACAGGGGCTACGAGAAGAAGCCCTACTGCAACGCACACTACCCCAAG  
CAGTCTTTCACCATGGTGGCGGACACCCCGGAAAACCTTCGCCTCAAGCAACAGAGTGAGCTCCAGAGTCAGGTG  
CGCTACAAGGAGGAGTTTGAAGAACAAGGGCAAAGGTTTCAGCGTAGTGGCAGACACGCCCCAGCTCCAGAGA  
ATCAAGAAGACCCAGGACCAGATCAGTAACATAAAATACCATGAGGAGTTTGAAGAAGCCGCATGGGCCCTAGC  
GGGGGCGAGGGCATGGAGCCAGAGCGTCGGGATTACAGGACGGCAGCAGCTACCGGCGGGCCCTGGAGCAGCAG  
CAGCCTCACCACATCCCGACCAGTGCCCCGTTTACCAGCAGCCCCAGCAGCAGCCGGTGGCCAGTCCCTATGGT  
GGCTACAAGGAGCCTGCAGCCCCAGTCTCCATACAGCGCAGCCCCCATCTGTCTTCAGCACATTCACGGGCAT  
CGCATCCGTCTGGGCGTGACCCGTCCATTCTTCAGTGTCTCTGTTTTTTAAACCTGCGACAGCTTGTGATTCC  
TACCCCTCTTCCAGCTTCTTTGCCAACAGGCTTCTTCTGCCACTTCTGCGGGCTCCCTCCTCTGCGAGGCT  
TCCCCCTTGATCGACTTCTTGGTTTTCTCTCTGGATGGAACGGGCATGGGCCTCTCTGGGGGAGGCGAGGCTGGA  
ATGGGAGACCTGTTGGCCTGTGGGCCTCACCTGCCCCCTCTGTTCTCTCCCTCACATCCTCCTGCCAGCTCCTC  
ACATACCCACACATTCCAGGGCTGGGGTGAGCCTGACTGCCAGGACCCAGGTGAGGGGCTCCCTACATTCCCCA  
GAGTGGGATCCACTTCTTGGTTCCCTGGGATGGCGATGGGGACTCTGCCGCTGTGTAGGGACCAGTGGGATGGGCT  
CTACCTCTCTTTCTCAAAGAGGGGGCTCTGCCACCTGGGGTCTCTCTCCCTACCTCCCTCCTCAGGGGCAACAA  
CAGGAGAATGGGGTTCTGCTGTGGGGCGAATTATCCCTCCCGCGCGTTCTTCGCACACTGTGATTTTGCC  
CTCCTGCCACGCAGACCTGCAGCGGGCAAAGAGCTCCCGAGGAAGCACAGCTTGGGTGAGGTTCTTGCCCTTCT  
TAATTTTAGGGACAGCTACCGGAAGGAGGGGAACAAGGAGTTCTCTTCCGCAGCCCCCTTTCCCCACGCCCCACCC  
CAGTCTCCAGGGACCCTTGCTGCTCCTAGGCTGGAAGCCATGGTCCCAGTGTAGGGCAAGGGTGCCTCAGG  
ACCTTTTGGTCTTCAGCCTCCCTCAGCCCCCAGGATCTGGGTAGGTGGCCGCTCCTCCTGCTCCTCATGGGAA  
GATGTCTCAGAGCCTTCCATGACCTCCCTCCCGAGCCCAATGCCAAGTGGACTTGAGCTGCACAAAGTCAGCA  
GGGACCACTAAATCTCCAAGACCTGGTGTGCGGAGGCAGGAGCATGTATGTCTGCAGGTGTCTGACACGCAAGTG  
TGTGAGTGTGAGTGTGAGAGATGGGGCGGGGTGTGTCTGTAGGTGTCTCTGGGCCTGTGTGTGGGTGGGGTTAT  
GTGAGGGTATGAAGAGCTGTCTTCCCTGAGAGTTTCTCAGAACCACAGTGAGAGGGGAGGGCTCCTGGGGCA  
GAGAAGTCTTAGGTTTTCTTTGGAATGAAATCTCTCTTCCCCCATCTCTGAGTGGAGGAAGCCACCAATC  
TGCCCTTTGCAGTGTGCAGGGTGAAGGTAAAGAGTTGGTGTGGAGTTGGGGCTGCCATAGGGTCTGCAGCCTGC  
TGGGGCTAAGCGGTGGAGGAAGGCTCTGTCACTCCAGGCATATGTTTCCCCATCTCTGTCTGGGGCTACAGAATA  
GGGTGGCAGAAGTGTACCCCTGTGGGTGTCTCCCTCGGGGGCTCTTCCCTAGACCTCCCCCTCACTTACATAAA  
GCTCCCTTGAAGCAAGAAAGCTCTCTGCTCATGGGTGGCTGTGACAACCCTGGCCTCACTTGATTCTCTGGT  
TTTCTTGCCACCCTCTGGGAGTCCCCATCCATTTTCTCTGAGCCCAACCAGGCCCTGCCATTGGCCTCTTGT  
CCCTTGGCACACTTGTACCCACAGGTGAGGGGCAGGACCTGAAGGTATTGGCCTGTTCAACATCAGTCATCATG  
GGTGTTTTGTCAACTGCTTGTAAATTGATTGGGGATGTTGCCCGAATGAGAGGTTGAGGAAAAGACTGTGG  
GTGGGGAGGCCCTGCCTGACCCATCCCTTTCTTTCTGGCCCCAGCCTAGGTGGAGGCAAGTGAATATCTTAT  
ATTGGGCGATTTGGGGGCTCGGGGAGGCAGAGAATCTTGGGAGTCTTGGGTGGCGCTGGTGCACTTCTGTTTCC  
TCTTGATCTCAAAGCACAAATGTGGATTTGGGGACCAAGGTCAGGGACACATCCCTTAGAGGACCTGAGTTTGG  
GAGAGTGGTGTGAGTGAAGGGAGGAGCAGCAAGAAGCAGCCTGTTTTACTCAGCTTAATTCCTTCCCAGATAA  
GGCAAGCCAGTCATGGAATCTTGCTGCAGGCCCTCCCTCTACTCTTCTGCTCTAAATAAGGGGCCGTTTTCTT  
ACACACCCCCAGAGAGAGGAGGGACTGTACACTGGTGTGAGTGACCGGGGGCTGCTGGGCGTCTGTTCTTTAC  
CAAAACCATCCATCCCTAGAAGAGCACAGAGCCCTGAGGGGCTGGGCTGGGCTGGGCTGAGCCCTGGTCTTCTC  
TACAGTTCACAGAGGCTTTTCTAGCTCATTAAATCCCAGGAAAGAGGCATCAAAGCTAGAATGTGAATATACTTT  
TGTGGACCAATACTAAGAATAACAAGAAGCCAGTGGTGAGGAAAGTGCCTCTCCAGCACTGCCTCCTGTTTT  
CTCCCTCTCATGTCCCTCCAGGAAAATGACTTTATTGCTTAATTTCTGCCTTTCCCCCTCACACATGCATTT  
TGGGCTTTTTTTATAGCTGGAATAAATAACCACCTACAAACCTGTATTTAAAAAGAAACAGAAATGACC  
ACGTGAAATTTGCCTCTGTCCAAACATTTATCCGTGTGTATGTGTATGTGTGTGAGTGTGTGAAGCCGCCAGTT  
CATCTTTTTATATGGGGTGTGTGTCTCATTTTGGTCTGTTTTGGTCCCTCCCTCGTGGGCTGTGTCTGGGATC  
AAACCTTTCTGGCCTGTTATGATTCTGAACATTTGACTTGAACCACAAGTGAATCTTTCTCTGGTGACTCAAT

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**FIGURE 4800B**

AAAAGTATAATTTTACCTGC

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**FIGURE 4801**

CTTTTTCTTTTTCCGGCGTTCAAGATGTCGAAGCGAGGACGTGGTGGGTCTCTGGTGCGAAATTCCGGATTT  
CCTTGGGTCTTCCGGTAGGAGCTGTAATCAATTGTGCTGACAACACAGGAGCCAAAAACCTGTATATCATCTCCG  
TGAAGGGGATCAAGGGACGGCTGAACAGACTTCCCGCTGCTGGTGTGGGTGACATGGTGATGGCCACAGTCAAGA  
AAGGCAAACCAGAGCTCAGAAAAAAGGTACATCCAGCAGTGGTCATTGACAACGAAAGTCATACCGTAGAAAAG  
ATGGCGTGTTTCTTTATTTTGAAGATAATGCAGGAGTCATAGTGAACAATAAAGGCGAGATGAAAGGTCTGCCA  
TTACAGGACCAGTAGCAAAGGAGTGTGCAGACTTGTGGCCCCGGATTGCATCCAATGCTGGCAGCATTGCATGAT  
TCTCCAGTATATTTGTAAAAAATAAAAAAACTAAACCCATT

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**FIGURE 4802**

MSKRGRGGSSGAKFRISLGLPVGAVINCADNTGAKNLYIISVKGIKGRLNRLPAAGVGDMVMATVKKGKPELRKK  
VHPAVVIRQRKSYRRKDGVFLYFEDNAGVIVNNKGEMKGSAITGPFVAKECADLWPRIASNAGSIA

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**FIGURE 4803**

TGCCAGCGGGGAGGCTGCAGCCGCGGGTTGTTACAGCTGCTGGAGCAGCAGCGGCCCCGCTCCCGGGAACCGTT  
CCCGGGCCGTTGATCTTCGGCCCCACACGAACAGCAGAGAGGGGCAGCAGGATGAATGTGGGCACAGCGCACAGC  
GAGGTGAACCCCAACACGCGGGTGATGAACAGCCGTGGCATCTGGCTCTCCTACGTGCTGGCCATCGGTCTCCTC  
CACATCGTGCTGCTGAGCATCCCGTTTGTGAGTGTCCTGTCGCTGGACCCTCACCAACCTCATTACAACATG  
GGCATGTATATCTTCTGCACACGGTGAAGGGGACACCCTTTGAGACCCCGACCAGGGCAAGGCGAGGCTGCTA  
ACCCACTGGGAGCAGATGGATTATGGGGTCCAGTTCACGGCCTCTCGGAAGTTCTTGACCATCACACCCATCGTG  
CTGTACTTCCTCACCAGCTTCTACACTAAGTACGACCAGATCCATTTTGTGCTCAACACCGTGTCCCTGATGAGC  
GTGCTTATCCCAAGCTGCCCCAGCTCCACGGAGTCCGGATTTTGGAAATCAATAAGTACTGAGAGTGACGCCCC  
TTCCCTGCCCAGGGTGGCAGGGGAGGGGTAGGGTAAAAGGCATGTGCTGCAACACTGAAGACAGAAAGAAGAAG  
CCTCTGGACACTGCCAGAGATGGGGGTTGAGCCTCTGGCCTAATTTCCCCCTCGCTTCCCCAGTAGCCAATT  
GGAGTAGCTTGTAGTGGGGTTGGGGTAGGCCCCCTGGGCTCTGACCTTTTCTGAATTTTTTGATCTTTCTCTTT  
GCTTTTTGAATAGAGACTCCATGGAGTTGGTCATGGAATGGGCTGGGCTCCTGGGCTGAACATGGACCACGCAGT  
TGCGACAGGAGGCCAGGGGAAAAACCCCTGCTCACTTGTTTGCCTCAGGCAGCCAAAGCACTTTAACCCCTGCA  
TAGGGAGCAGAGGGCGGTACGGCTTCTGGATTGTTTCACTGTGATTCTAGGTTTTTTCGATGCCACGCAGTGTG  
TGCTTTTGTGTATGGAAGCAAGTGTGGGATGGGTCTTTGCCTTTCTGGGTAGGGAGCTGTCTAATCCAAGTCCCA  
GGCTTTTGGCAGCTTCTCTGCAACCCACCGTGGGTCTGTTGGGAGTGGGGAGGGTCAGGTTGGGGAAAGATGG  
GGTAGAGTGTAGATGGCTTGGTTCXCAGAGGTGAGGGGGCCAGGGCTGCTGCCATCCTGGCCTGGTGGAGGTTGG  
GGAGCTGTAGGAGAGCTAGTGAGTCGAGACTTAGAAGAATGGGGCCACATAGCAGCAGAGGACTGGTGTAAGGGA

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**FIGURE 4804**

MNVGTAHSEVNPNTVRVMNSRGIWLSYVLAIGLLHIVLLSIPFVSVPVWTLTNLIHNMGYIFLHTVKGTPFETP  
DQGKARLLTHWEQMDYGVQFTASRKFLTITPIVLYFLTSFYTKYDQIHFVLNTVSLMSVLIPKLPQLHGVRIFGI  
NKY

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**FIGURE 4805**

GAATTTCGGGCGCTGGTTTGCAGCTGCTCCGTCATCGTGC GGCGCCGACGCTATCTCGCGCTCGTGTGCAGGCC  
GGCTCGGCTCCTGGTCCCCGGTGCGAGGGTTAACGCGAGGCCCGGCCTCGGTCCCCGGACTAGGCCGTGACCCC  
GGGTGCCATGAAGCAGGAGGGCTCGGCGCGCGCGCGCGCGGACAAAGCGAAACCGCCGCCGGCGGAGGAGA  
ACAAGAACCCCCACCGCCCGCGCCCCCAGGATGTGGAGATGAAAGAGGAGGCAGCGACGGGTGGCGGGTCAAC  
GGGGGAGGCAGACGGCAAGACGGCGGGCAGCGGTTGAGCACTCCAGCGAGAGCTGGACACAGTCACCTTGGA  
GGACATCAAGGAGCACGTGAAACAGCTAGAGAAAGCGGTTTCAGGCAAGGAGCCGAGATTCTGTGTCGGGGCCCT  
GCGGATGTGCTTCCACATCACGCCGCTCAACCACTAIGTTCTGTATAAGGCTGTGCAGGGCTTCTTCACTTC  
AAATAATGCCACTCGAGACTTTTTGCTCCCCCTTCTGGAAGAGCCCATGGACACAGAGGCTGATTACAGTTCCG  
TCCCCGACGGGAAAAGCTGCGTCGACACCCCTCCTGCCTGAAGTGGAAGCCTATCTCCAACCTCTCGTGGTCA  
CTTCATGATGAACAGCAAGCGCTACAAAGAGGCACAGAAGATCTCTGATGATCTGATGCAGAAGATCAGTACTCA  
GAACCGCCGGGCCCTAGACCTTGTAGCCGCAAAGTGTTACTATTATCACGCCCGGGTCTATGAGTTCTTGGACAA  
GCTGGATGTGGTGCAGCTTCTTGATGCTCGGCTCCGGACAGCTACGCTTCGGCATGACGCAGACGGGCAGGC  
CACCTGTGAACTCCTGCTGCGGAATTACCTACACTACAGCTTGTACGACCAGGCTGAGAAGCTGGTGTCCAA  
GTCTGTGTTCCAGAGCAGGCCAACAACAATGAGTGGGCCAGGTACCTCTACTACAGGGCGAATCAAAGCCAT  
CCAGCTGGAGTACTCAGAGGCCCGGAGAACGATGACCAACGCCCTTCGCAAGGCCCTCAGCACACAGCTGTGCG  
CTTCAAACAGACGGTGACAAGCTTCTCATCGTGGTGGAGCTGTTGCTGGGGGAGATCCCTGACCGGCTGCAGTT  
CCGCCAGCCCTCCCTCAAGCGCTCACTCATGCCCTATTTCTTCTGACTCAAGCTGTCAGGACAGGAAACCTAGC  
CAAGTTCAACCAGGTCTCGGATCAGTTTGGGGAGAAGTTTCAAGCAGATGGGACCTACACCCTAATTATCCGGCT  
GCGGCACAACGTGATTAAGACAGGTGTACGCATGATCAGCCTCTCCTATTCCCGAATCTCCTTGGCTGACATCGC  
CCAGAAGCTGCAGTTGGATAGCCCCGAAGATGCAGAGTTTATTGTTGCCAAGGCCATCCGGGATGGTGTATTGA  
GGCCAGCATCAACCACGAGAAGGGCTATGTCCAATCCAAGGAGATGATTGACATCTATTCCACCCGAGAGCCCCA  
GCTAGCCTTCCACCAGCGCATCTCCTTCTGCCTAGATATCCACAACATGTCTGTCAAGGCCATGAGGTTTCTCC  
CAAATCGTACAACAAGGACTTGGAGTCTGCAGAGGAACGGCGTGAGCGAGAACAGCAGGACTTGGAGTTTGCCAA  
GGAGATGGCAGAAGATGATGATGACAGCTTCCCTTGAGCTGGGGGGCTGGGGAGGGGTAGGGGGAATGGGGACAG  
GCTCTTTCCCCCTTGGGGGTCCCCTGCCCAGGGCACTGTCCCCATTTCCACACACAGCTCATATGCTGCATT  
GTGCAGGGGGTGGGGGTGCTGGGAGCCAGCCACCCTGACCTCCCCCAGGGCTCCTCCCCAGCCGGTGACTTACTG  
TACAGCAGGCAGGAGGGTGGGCAGGCAACCTCCCCGGGCAGGGTCTTGCCAGCAGTGTGGGAGCAGGAGGGGAA  
GGATAGTTCTGTGTACTCCTTTAGGGAGTGGGGGACTAGAACTGGGATGTCTTGGCTTGATGTTTTTTGAAGCT  
TCGATTATGATTTTTTAAACAATAAAAAGTTCTCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGCCGCGAAT  
TC



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**FIGURE 4806**

MKQEGSARRRGADKAKPPPGGGEQEP PPPAPQD VEMKEEAATGGGSTGEADGKTAAAVEHSQRELDTVTLEDI  
KEHVKQLEKAVSGKEPRFVLRALRMLPSTSRRLNHYVLYKAVQGFFTSNNATRD FLLPFLEEPMDTEADLQFRPR  
TGKAASTPLLPEVEAYLQLLVIFMMNSKRYKEAQKISDDLQKISTQNRALDLVAAKCYYYHARVYEF LDKLD  
VVR SFLHARLRTATLRHDADGQATLLNLLLRNYLHYSLYDQAEKLVSKSVFPEQANNNEWARYLYYTGR IKAIQL  
EYSEARRMTNALRKAPQHTAVGFKQTVHKLLIVVELLLGEIPDRLQFRQPSLKRSLMPYFLLTQAVRTGNLAKF  
NQVLDQFGEKFQADGTYTLIIRLRHNVIKTGVRMISLSYSRISLADIAQKLQLDSPEDAEFIVAKAIRDGVIEAS  
INHEKGYVQSKEMIDIYSTREPQLAFHQRI SFCLDIHNSVKAMRFPPKSYNKDLESAEERREREQQDLEFAKEM  
AEDDDDSFP

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**FIGURE 4807**

CTCCTCTCCAGCCCTTCTCCTGTGTGCCTGCCTCCTGCCGCCGCCACC**ATG**ACCACCTCCATCCGCCAGTTCACC  
TCCTCCAGCTCCATCAAGGGCTCCTCCGGCCTGGGGGGCGGCTCGTCCCGCACCTCCTGCCGGCTGTCTGGCGGC  
CTGGGTGCCGGCTCCTGCAGGCTGGGATCTGCTGGCGGCCTGGGCAGCACCTCGGGGGTAGCAGCTACTCCAGC  
TGCTACAGCTTTGGCTCTGGTGGTGGCTATGGCAGCAGCTTTGGGGGTGTTGATGGGCTGCTGGCTGGAGGTGAG  
AAGGCCACCATGCAGAACCTCAATGACCGCCTGGCCTCCTACCTGGACAAGGTGCGTGCCCTGGAGGAGGCCAAC  
ACTGAGCTGGAGGTGAAGATCCGTGACTGGTACCAGAGGCAGGCCCCGGGGCCCCGGCTGACTACAGCCAGTAC  
TACAGGACAATTGAGGAGCTGCAGAACAAGATCCTCACAGCCACCGTGGACAATGCCAACATCCTGCTACAGATT  
GACAATGCCCGTCTGGCTGCTGATGACTTCCGCACCAAGTTTGAGACAGAGCAGGCCCTGCGCCTGAGTGTGGAG  
GCCGACATCAATGGCCTGCGCAGGGTGTGGATGAGCTGACCTGGCCAGAGCCGACCTGGAGATGCAGATTGAG  
AACCTCAAGGAGGAGCTGGCCTACCTGAAGAAGAACCACGAGGAGGAGATGAACGCCCTGCCAGGCCAGGTGGGT  
GGTGAGATCAATGTGGAGATGGACGCTGCCCCAGGCGTGGACCTGAGCCGCATCCTCAACGAGATGCGTGACCAG  
TATGAGAAGATGGCAGAGAAGAACCACAAGGATGCCGAGGATTGGTTCTTCAGCAAGACAGAGGAAGTGAACCGC  
GAGGTGGCCACCAACAGTGAGCTGGTGCAGAGTGGCAAGAGTGAGATCTCGGAGCTCCGGCGCACCATGCAGGCC  
TTGGAGATAGAGCTGCAGTCCCAGCTCAGCATGAAAGCATCCCTGGAGGGCAACCTGGCGGAGACAGAGAACCGC  
TACTGCGTGCAGCTGTCCCAGATCCAGGGGCTGATTGGCAGCGTGGAGGAGCAGCTGGCCCAGCTTCGCTGCCAG  
ATGGAGCAGCAGAACCAGGAATACAAAATCCTGCTGGATGTGAAGACGCGGCTGGAGCAGGAGATTGCCACCTAC  
CGCCGCCTGCTGGAGGGAGAGGATGCCACCTGACTCAGTACAAGAAAGAACCGGTGACCACCCGTCAGGTGCGT  
ACCATTGTGGAAGAGGTCCAGGATGGCAAGGTCATCTCCTCCCGCAGCAGGTCCACCAGACCACCCGCT**AGGA**  
CTCAGCTACCCCGGCCGCCACCCAGGAGGCAGGAGCAGCCGCCCCATCTGCCCCACAGTCTCCGGCCTCTCCA  
GCCTCAGCCCCCTGCTTCAGTCCCTTCCCCATGCTTCCTTGCTGATGACAATAAAGCTTGTTGACTCAGCTAAA  
AAAAAAAAAAAA

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**FIGURE 4808**

MTTSIRQFTSSSSIKGSSGLGGSSRTSCRLSGGLGAGSCRLGSAGGLGSTLGGSSYSSCYSGSGGGYGSSF  
VDGLLAGGEKATMQNLNDRSLASYLDKVRAL EEANTELEVKIRDWYQRQAPGPARDYSQYYRTIEELQNKILTATV  
DNANILLQIDNARLAADDFR TKFETE QALRLSVEADINGLRRVLDELTLARADLEMQIENLKEELAYLKKNHEEE  
MNALRGQVGGEINVEDAAPGV DLSRILNEMRDQYEKMAEKNRKAEDWFFSKTEELNREVATNSELVQSGKSEI  
SELRRMQALEIELQSQLSMKASLEGNLAETENRYCVQLSQIQGLIGSVEEQLAQLRCEMEQQNQEYKILLDVKT  
RLEQEIATYRRLLEGEDAHLTQYKKEPVTTTRQVRTIVEEVQDGKVISSREQVHQTTTR

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**FIGURE 4809**

ATGACCACCTGCAGCCGCCAGTTCACCTCCTCCAGCTCCATGAAGGGCTCCTGCGGCATCGGAGGCGGCATCGGG  
GGCGGCTCCAGCCGCATCTCCTCCGTCTGGCCGGAGGGTCCTGCCGTGCCCCAGCACCTACGGGGGCGGCCTG  
TCTGTCTCCTCTCGCTTCTCCTCTGGGGGAGCCTGCGGGCTGGGGGGCGGCTATGGCGGTGGCTTCAGCAGCAGC  
AGCAGCTTTGGTAGTGGCTTCGGGGGAGGATATGGTGGTGGCCTTGGTGCTGGCTTCGGTGGTGGCTTGGGTGCT  
GGCTTTGGTGGTGGTTTTGCTGGTGGTGATGGGCTTCTGGTGGGCAGTGAGAAGGTGACCATGCAGAACCTCAAT  
GACCGCTGGCTCCTACCTGGACAAGGTGCGTGCTCTGGAGGAGGCCAACGCCGACCTGGAAGTGAAGATCCGT  
GACTGGTACCAGAGGCAGCGGCCAGTGAGATCAAAGACTACAGTCCCTACTTCAAGACCATCGAGGACCTGAGG  
AACAAGATCATTGCGGCCACCATTGAGAATGCGCAGCCCATTTTGCAGATTGACAATGCCAGGCTGGCAGCCGAT  
GACTTCAGGACCAAGTATGAGCACGAACTGGCCCTGCGGCAGACTGTGGAGGCCGACGTCAATGGCTGCGCCGG  
GTGTTGGATGAGCTGACCTGGCCAGGACTGACCTGGAGATGCAGATCGAAGGCCTGAAGGAGGAGCTGGCCTAC  
CTGAGGAAGAACCACGAGGAGGAGATGCTTGCTCTGAGAGGTGAGACCGCGGAGATGTGAACGTGGAGATGGAT  
GCTGCACCTGGCGTGGACCTGAGCCGCATCCTGAATGAGATGCGTGACCAGTACGAGCAGATGGCAGAGAAAAAC  
CGCAGAGACGCTGAGACCTGGTTCTGAGCAAGACCGAGGAGCTGAACAAAGAAGTGGCCTCCAACAGCGAACTG  
GTACAGAGCAGCCGAGTGAGGTGACGGAGCTCCGGAGGGTGCTCCAGGGCCTGGAGATTGAGCTGCAGTCCCAG  
CTCAGCATGAAAGCATCCCTGGAGAACAGCCTGGAGGAGACCAAAGGCCGCTACTGCATGCAGCTGTCCCAGATC  
CAGGGACTGATTGGCAGTGTGGAGGAGCAGCTGGCCCAGCTACGCTGTGAGATGGAGCAGCAGAGCCAGGAGTAC  
CAGATCTTGCTGGATGTGAAGACGCGGCTGGAGCAGGAGATTGCCACCTACCGCCGCTGCTGGAGGGCGAGGAT  
GCCCACCTTTCTCCAGCAAGCATCTGGCCAATCTATTCTTCCCGCGAGGTCTTCACCTCCTCCTCGTCTCT  
TCGAGCCGTCAGACCCGGCCATCCTCAAGGAGCAGAGCTCATCCAGCTTCAGCCAGGGCCAGAGCTCCTAG

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**FIGURE 4810**

CGGGGGTTGCTCCGTCCGTGCTCCGCCTCGCCATGACTTCCTACAGCTATCGCCAGTCGTCGGCCACGTGCTCCT  
TCGGAGGCCTGGGCGGCGGCTCCGTGCGTTTTGGGCCGGGGGTCGCTTTTCGCGCGCCAGCATTACGGGGGGCT  
CCGGCGGCGCGGCGGTATCCGTGTCCTCCGCCCCGCTTTGTGTCCTCGTCCTCCTCGGGGGGCTACGGCGGCGGCT  
ACGGCGGCGTCTGACCGCGTCCGACGGGCTGCTGGCGGGCAACGAGAAGCTAACCATGCAGAACCTCAACGACC  
GCCTGGCCTCCTACCTGGACAAGGTGCGCGCCCTGGAGGCGGCCAACGGCGAGCTAGAGGTGAAGATCCGCGACT  
GGTACCAGAAGCAGGGGCTGGGCCCTCCCGCGACTACAGCCACTACTACACGACCATCCAGGACCTGCGGGACA  
AGATTCTTGGTGCCACCATTGAGAACTCCAGGATTGTCCTGCAGATCGACAACGCCCCGTCTGGCTGCAGATGACT  
TCCGAACCAAGTTTTGAGACGGAACAGGCTCTGCGCATGAGCGTGGAGGCCGACATCAACGGCCTGCGCAGGGTGC  
TGGATGAGCTGACCCTGGCCAGGACCGACCTGGAGATGCAGATCGAAGGCCTGAAGGAAGAGCTGGCCTACCTGA  
AGAAGAACCATGAGGAGGAAATCAGTACGCTGAGGGGCCAAGTGGGAGGCCAGGTGAGTGTGGAGGTGGATTCCG  
CTCCGGGCACCGATCTCGCCAAGATCCTGAGTGACATGCGAAGCCAATATGAGGTGATGGCCGAGCAGAACCGGA  
AGGATGCTGAAGCCTGGTTCACCAGCCGGACTGAAGAATTGAACCGGGAGGTGCTGGCCACACGGAGCAGCTCC  
AGATGAGCAGGTCCGAGGTACTGACCTGCGGCGCACCTTCAGGGTCTTGAGATTGAGCTGCAGTCACAGCTGA  
GCATGAAAGCTGCCTTGGAAGACACACTGGCAGAAACGGAGGCGCGCTTTGGAGCCCAGCTGGCGCATATCCAGG  
CGCTGATCAGCGGTATTGAAGCCCAGCTGGCGGATGTGCGAGCTGATAGTGAGCGGCAGAATCAGGAGTAACAGC  
GGCTCATGGACATCAAGTCGCGGCTGGAGCAGGAGATTGCCACCTACCGCAGCCTGCTCGAGGGACAGGAAGATC  
ACTACAACAATTTGTCTGCCTCCAAGGTCTCTGAGGCGAGGCTCTGGGGCTTCTGCTGTCTTTGGAGGGTG  
TCTTCTGGGTAGAGGGATGGGAAGGAAGGGACCCTTACCCCGGCTCTTCTCCTGACCTGCCAATAAAAATTTAT  
GGTCCAAGGG

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**FIGURE 4811**

MTSYSYRQSSATSSFGLGGGSVRFGPGVAFRAPSIHGGSGGRGVS SVSSARFVSSSSSGGYGGGYGGVLTASDGL  
LAGNEKLTMQNLNDRLASYLDKVRALEAANGELEVKIRDWYQKQGPGPSRDYSHYYTTIQDLRDKILGATIENSR  
IVLQIDNARLAADDFRTKFETEALRMSVEADINGLRRVLDEITLARTDLEMQIEGLKEELAYLKKNHEEEISTL  
RGQVGGQVSVEVDSAPGTDLAKILSDMRSQYEVMAEQNRKDAEAWFTSRTEELNREVAGHTEQLQMSRSEVTDLR  
RTLQGLEIELSQLSMKAALEDTLAETEARFGAQLAHIQALISGIEAQLADVRADSERQNQEYQRLMDIKSRLEQ  
EIATYRSLLLEGQEDHYNNLSASKVL

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**FIGURE 4812**

GGTACCTCCTGCCAGCACCTCTTGGGTTTTGCTGAGAACTCACGGGCTCCAGCTACCTGGCCATGACCACCACATT  
TCTGCAAACCTTCTTCCCTCCACCTTTGGGGGTGGCTCAACCCGAGGGGGTTCCCTCCTGGCTGGGGGAGGTGGCTT  
TGGTGGGGGGAGTCTCTCTGGGGGAGGTGGAAGCCGAAGTATCTCAGCTTCTTCTGCTAGGTTTGTCTCTTCAGG  
GTCAGGAGGAGGATATGGGGGTGGCATGAGGGTCTGTGGCTTTGGTGGAGGGGCTGGTAGTGTTCGGTGGAGG  
CTTTGGAGGGGGCGTTGGTGGGGTTTTGGTGGTGGCTTTGGTGGTGGCGATGGTGGTCTCCTCTCTGGCAATGA  
GAAAATTACCATGCAGAACCTCAATGACCGCTGGCCTCTACCTGGACAAGGTACGTGCCCTGGAGGAGGCCAA  
TGCTGACCTGGAGGTGAAGATCCATGACTGGTACCAGAAGCAGACCCAGCCAGCCAGAATGCGACTACAGCCA  
ATACTTCAAGACCATTGAAGAGCTCCGGGACAAGATCATGGCCACCACCATCGACAACCTCCCGGGTCATCTGGA  
GATCGACAATGCCAGGCTGGCTGCGGACGACTTCAGGCTCAAGTATGAGAATGAGCTGGCCCTGCGCCAGGGCGT  
TGAGGCTGACATCAACGGCTTGCGCCGAGTCTTGATGAGCTGACCCTGGCCAGGACTGACCTGGAGATGCAGAT  
CGAGGGCCTGAATGAGGAGCTAGCCTACCTGAAGAAGAACCACGAAGAGGAGATGAAGGAGTTCAGCAGCCAGCT  
GGCCGGCCAGGTCAATGTGGAGATGGACGCAGCACCGGGTGTGGACCTGACCCGTGTGCTGGCAGAGATGAGGGA  
GCAGTACGAGGCCATGGCGGAGAAGAACC GCCGGATGTGAGGCCTGGTTCTTCAGCAAGACTGAGGAGCTGAA  
CAAAGAGGTGGCCTCCAACACAGAAATGATCCAGACCAGCAAGACGGAGATCACAGACCTGAGACGCACGATGCA  
GGAGCTGGAGATCGAGCTGCAGTCCCAGCTCAGCATGAAAGCTGGGCTGGAGAACTCACTGGCCGAGACAGAGTG  
CCGCTATGCCACGCAGCTGCAGCAGATCCAGGGGCTCATGGTGGCTGGAGGCCAGCTGAGTGAGCTCCGATG  
CGAGATGGAGGCTCAGAACCAGGAGTACAAGATGCTGCTTGACATAAAGACACGGCTGGAGCAGGAGATCGCTAC  
TTACCGCAGCCTGCTCGAGGGCCAGGATGCCAAGATGGCTGGCATTGGCATCAGGGAAGCCTCTTCAGGAGGTGG  
TGGTAGCAGCAGCAATTTCCACATCAATGTAGAAGAGTCAGTGGATGGACAGGTGGTTTCTTCCCAAGAGAGA  
AATCTAAGTGTCTATTGCAGGAGAAACGTCCCTTGCCACTCCCCACTCTCATCAGGCCAAGTGGAGGACTGGCCA  
GAGGGCCTGCACATGCAAACCTCCAGTCCCTGCCTTCAGAGAGCTGAAAAGGGTCCCTCGGTCTTTTATTTAGGG  
CTTTGCATGCGCTCTATTCCCCCTCTGCCTCTCCCCACCTTCTTTGGAGCAAGGAGATGCAGCTGTATTGTGTAA  
CAAGCTCATTGTACAGTGTCTGTTTCATGTAATAAAGAATTACTTTTCCTTTTGCAAAT

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**FIGURE 4813**

MTTFLQTSSSTFGGGSTRGGSLLAGGGGFGGGSLSGGGGSRSISASSARFVSSGSGGGYGGGMRVCGFGGGAGS  
VFGGGFGGGVGGGFGGGFGGGDGGLLSGNEKITMQNLNDRLASYLKVRAL E E A N A D L E V K I H D W Y Q K Q T P A S P E  
CDYSQYFKTIEELRDKIMATTIDNSRVILEIDNARLAADD F R L K Y E N E L A L R Q G V E A D I N G L R R V L D E L T L A R T D  
LEMQIEGLNEELAYLKNHEEEMKEFSSQLAGQVNVEMDAAPGVDLTRVLAEMREQYEAMAEKNRRDVEAWFFSK  
TEELNKEVASNTEMIQTSKTEITDLRRTMQELEIELQSQLSMKAGLENSLAETECRYATQLQQIQGLIGGLEAQL  
SELRCEMEAQNQEYKMLLDIKTRLEQEIATYRSLEGGQDAKMAGIGIREASSGGGGSSSNFHINVEESVDGQVVS  
SHKREI



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**FIGURE 4814**

GGCCAAGCAAGCTTCTATCTGCACCTGCTCTCAATCCTGCTCTCACCATGAGCCTCCGCCTGCAGAGCTCCTCTG  
CCAGCTATGGAGGTGGTTTCGGGGGTGGCTCTTGCCAGCTGGGAGGAGGCCGTGGTGTCTCTACCTGTTCAACTC  
GGTTTGTGTCTGGGGGATCAGCTGGGGGCTATGGAGGCGGCGTGAGCTGTGGTTTTGGTGGAGGGGCTGGTAGTG  
GCTTTGGAGGTGGCTATGGAGGTGGCCTTGGAGGTGGCTATGGAGGTGGCCTTGGAGGTGGCTTTGGTGGGGGTT  
TTGCTGGTGGCTTTGTTGACTTTGGTGCTTGTGATGGCGGCCCTCCTACTGGCAATGAGAAGATCACCATGCAGA  
ACCTCAACGACCGCCTGGCTTCTACCTGGAGAAGGTGCGCGCCCTGGAGGAGGCCAACGCTGACCTGGAGGTGA  
AGATCCGTGACTGGCACCTGAAGCAGAGCCCAGCTAGCCCTGAGCGGGACTACAGCCCCTACTACAAGACCATTG  
AAGAGCTCCGGGACAAGATCCTGACCGCCACCATTGAAAACAACCGGGTCATCCTGGAGATTGACAATGCCAGGC  
TGGCTGTGGACGACTTCAGGCTCAAGTATGAGAATGAGCTGGCCCTGCGCCAGAGCGTGGAGGCCGACATCAACG  
GCCTGCGCCGGGTGCTGGATGAGCTCACTCTGTCTAAGACTGACCTGGAGATGCAGATCGAGAGCCTGAATGAAG  
AGCTAGCCTACATGAAGAAGAACCATGAAGAGGAGATGAAGGAATTTAGCAACCAGGTGGTCGGCCAGGTCAACG  
TGGAGATGGATGCCACCCAGGCATTGACCTGACCCGCGTGCTGGCAGAGATGAGGGAGCAGTACGAGGCCATGG  
CAGAGAGGAACCGCCGGGATGCTGAGGAATGGTTCCACGCCAAGAGTGACAGAGCTGAACAAGGAGGTGTCTACCA  
ACACTGCCATGATTAGACCAGCAAGACAGAGATCACGGAGCTCAGGCGCACGCTCCAAGGCCTGGAGATTGAGC  
TGCAGTCCCAGCTGAGCATGAAAGCGGGGCTGGAGAACACGGTGGCAGAGACGGAGTGCCGCTATGCCCTGCAGC  
TGCAGCAGATCCAGGGACTCATCAGCAGCATCGAGGCCAGCTGAGCGAGCTCCGCAGTGAGATGGAGTGCCAGA  
ACCAAGAGTACAAGATGCTGCTGGACATCAAGACACGTCTGGAGCAGGAGATCGCCACCTACCGCAGCCTGCTCG  
AGGGCCAGGACGCCAAGAAGCGTCAGCCCCCGTTAGCACCTCTGTTACCACGACTTCTAGTGCCTCTGTTACCACC  
ACCTCTAATGCCTCTGGTCGCCGCACTTCTGATGTCCGTAGGCCTTAAATCTGCCTGGCGTCCCCTCCCTCTGTC  
TTCAGCACCCAGAGGAGGAGAGAGCCGGCAGTTCCTGTCAGGAGAGAGGAGGGGCTGCTGGACCCAAGGCTCAGT  
CCCTCTGCTCTCAGGACCCCCGTCTGACTCTCTCCTGATGGTGGGCCCTCTGTGCTCTTCTCTTCCGGTCGGA  
TCTCTCTCCTCTCTGACCTGGATACGCTTTGGTTCTCAACTTCTCTACCCCAAAGAAAAGATTATTCAATAAAG  
TTTCTGCCTTTCTGCAAACATAAAAA

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**FIGURE 4815**

MSLRLOSSSASYGGGFGGGSCQLGGGRGVSTCSTRFVSGGSAGGYGGGVSCGFGGGAGSGFGGGYGGGLGGGYGG  
GLGGGFGGGFAGGFVDFGACDGGLLTGNEKITMQNLNDRLASYLEKVRALEEANADLEVKIRDWHLKQSPASPER  
DYSPYYKTIEELRDKILTATIENNRVILEIDNARLAVDDFRLKYENELALRQSVEADINGLRRVLDLTLSKTDL  
EMQIESLNEELAYMKKNHEEEMKEFSNQVVGQVNVEMDATPGIDLTRVLAEMREQYEAMAERNRRDAEEWFHAKS  
AELNKEVSTNTAMIQTSKTEITELRRTLQGLEIELQSQLSMKAGLENTVAETECRYALQLQQIQGLISSIEAQLS  
ELRSEMECQNQEYKMLLDIKTRLEQEIATYRSLLEGQDAKKRQPP

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**FIGURE 4816**

ACCCGAGCACCTTCTCTTCACTCAGCCAACTGCTCGCTCGCTCACCTCCCTCCTCTGCACCATGACTACCTGCAG  
CCGCCAGTTACCTCCTCCAGCTCCATGAAGGGCTCCTGCGGCATCGGGGGCGGCATCGGGGGCGGCTCCAGCCG  
CATCTCCTCCGTCTGGCCGGAGGGTCCTGCCGCGCCCCAGCACCTACGGGGGCGGCCTGTCTGTCTCATCCTC  
CCGCTTCTCCTCTGGGGGAGCCTACGGGCTGGGGGGCGGCTATGGCGGTGGCTTCAGCAGCAGCAGCAGCAGCTT  
TGGTAGTGGCTTTGGGGGAGGATATGGTGGTGGCCTTGGTGCTGGCTTGGGTGGTGGCTTTGGTGGTGGCTTTGC  
TGGTGGTGATGGGCTTCTGGTGGGCAGTGAGAAGGTGACCATGCAGAACCTCAATGACCGCTGGCCTCCTACCT  
GGACAAGGTGCGTGCTCTGGAGGAGGCCAACGCCGACCTGGAAGTGAAGATCCGTGACTGGTACCAGAGGCAGCG  
GCCTGCTGAGATCAAAGACTACAGTCCCTACTTCAAGACCATTGAGGACCTGAGGAACAAGATTCTCACAGCCAC  
AGTGGACAATGCCAATGTCCTTCTGCAGATTGACAATGCCCGTCTGGCCGCGGATGACTTCCGCACCAAGTATGA  
GACAGAGTTGAACCTGCGCATGAGTGTGGAAGCCGACATCAATGGCCTGCGCAGGGTGCTGGACGAAGTACCT  
GGCCAGAGCTGACCTGGAGATGCAGATTGAGAGCCTGAAGGAGGAGCTGGCCTACCTGAAGAAGAACCACGAGGA  
GGAGATGAATGCCCTGAGAGGCCAGGTGGGTGGAGATGTCAATGTGGAGATGGACGCTGCACCTGGCGTGGACCT  
GAGCCGCATTCTGAACGAGATGCGTGACCAGTATGAGAAGATGGCAGAGAAGAACCGAAGGATGCCGAGGAATG  
GTTCTTACCAAGACAGAGGAGCTGAACCGCGAGGTGGCCACCAACAGCGAGCTGGTGCAGAGCGGCAAGAGCGA  
GATCTCGGAGCTCCGGCGCACCATGCAGAACCTGGAGATTGAGCTGCAGTCCCAGCTCAGCATGAAAGCATCCCT  
GGAGAACAGCCTGGAGGAGACCAAAGGTGCTACTGCATGCAGCTGGCCAGATCCAGGAGATGATTGGCAGCGT  
GGAGGAGCAGCTGGCCAGCTCCGCTGCGAGATGGAGCAGCAGAACCAAGGAGTACAAGATCCTGCTGGACGTGAA  
GACGCGGCTGGAGCAGGAGATCGCCACCTACCGCGCCTGCTGGAGGGCGAGGACGCCCACCTCTCCTCCTCCCA  
GTTCTCCTCTGGATCGCAGTCATCCAGAGATGTGACCTCCTCCAGCCGCCAAATCCGCACCAAGGTCATGGATGT  
GCACGATGGCAAGGTGGTGTCCACCCACGAGCAGGTCTTCGCACCAAGAACTGAGGGCTGCCAGCCCCGCTCAG  
GCCTAGGAGGCCCCCGTGTGGACACAGATCCCACTGGAAGATCCCCCTCTCCTGCCAAGCACTTCACAGCTGGA  
CCCTGCTTACCCCTCACCCCTCCTGGCAATCAATACAGCTTCATTATCTGAGTTGCAT

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**FIGURE 4817**

MTTCRQFTSSSSMKGSCGIGGGIGGGSSRISSVLAGGSCRAPSTYGGGLSVSSSRFSSGGAYGLGGGYGGGFSS  
SSSSFGSGFGGGYGGGLGAGLGGGFAGGDGLLVGSEKVTMQLNDRLASYLDKVRALEEANADLEVKIRDW  
YQRQRP AEIKDYSPYFKTIEDLRNKILTATVDNANVLLQIDNARLAADDFRTKYETELNLRMSVEADINGLRRVL  
DELT LARADLEMQIESLKEELAYLKKNH EEMNALRGQVGGDVNVEMDAAPGV DLSRILNEMRDQYEKMAEKNRK  
DAEEWFFTKTEELNREVATNSELVQSGKSEISELRRTMQLNLEIELQSQLSMKASLENSLEETKGRYCMQLAQIQE  
MIGSVEEQLAQLRCEMEQQNQEYKILLDVKTRLEQEIATYRRLLEGED AHLSSSQFSSGSQSSRDVTSSSRQIRT  
KVMDVHDGKVVSTHEQVLR TKN

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**FIGURE 4818**

AGCCCCCTGCCCTCGCCGCCCGCCGCTGCCTGGGCGGGCCGAGGATGCGGCGCAGCGCCTCGGCGGCCAGGC  
TTGCTCCCCCTCCGGCACGCCCTGCTAACTTCCCCCGCTACGTCCCCGTTGCCCCGCCGGGCCGCCCCGTCTCCCCG  
CGCCCTCCGGGTGCGGTCTCTCCAGGAGCGCCAGGCGCTGCCGCGGTGTGCCCTCCGCCGCTCGCCCCGCGCCCCG  
CGCTCCCCGCTGCGCCCAGCGCCCCGCGCCCGCAGTCTCGGGCGGTATGCTGCCCCCTCTGCTCGTGG  
CCGCCCTGCTGCTGGCCGCCGGGCCCGGGCCGAGCCTGGGCGACGAAGCCATCCACTGCCCCGCCCTGCTCCGAGG  
AGAAGCTGGCGCGCTGCCGCCCCCGTGGGCTGCGAGGAGCTGGTGCGAGAGCCGGGCTGCGGCTGTTGCGCCA  
CTTGCGCCCTGGGCTTGGGGATGCCCTGCGGGGTGTACACCCCCGTTGCGGCTCGGGCCTGCGCTGCTACCCGC  
CCCAGGGGTGGAGAAGCCCCTGACACACTGATGCACGGGCAAGGCGTGTGCATGGAGCTGGCGGAGATCGAGG  
CCATCCAGGAAAGCCTGCAGCCCTCTGACAAGGACGAGGGTGACCACCCCAACAACAGCTTCAGCCCTGTAGCG  
CCCATGACCGCAGGTGCCCTGCAGAAGCACTTCGCCAAAATTTCGAGACCGGAGCACCAGTGGGGGCAAGATGAAGG  
TCAATGGGGCGCCCCGGGAGGATGCCCGGCCGTGTGCCCCAGGGCTCCTGCCAGAGCGAGCTGCACCGGGCGCTGG  
AGCGGCTGGCCGCTTCACAGAGCCGCACCCACGAGGACCTCTACATCATCCCCATCCCCAACTGCGACCGCAACG  
GCAACTTCCACCCCCAAGCAGTGTACCCAGCTCTGGATGGGCAGCGTGGCAAGTGTGGTGTGTGGACCGGAAGA  
CGGGGGTGAAGCTTCCGGGGGCGCTGGAGCCAAAGGGGGAGCTGGACTGCCACCAGCTGGCTGACAGCTTTTCGAG  
AGTGAGGCCTGCCAGCAGGCCAGGGACTCAGCGTCCCCTGCTACTCCTGTGCTCTGGAGGCTGCAGAGCTGACCC  
AGAGTGGAGTCTGAGTCTGAGTCTGTCTCTGCCTGCGGCCCAGAAGTTTCCCTCAAATGCGCGTGTGCACGTGT  
GCGTGTGCGTGCCTGT  
TTGGTGTACACAGCCCAAGAGGACTGAGACTGGCACTTAGCCCAAGAGGTCTGAGCCCTGGTGTGTGTGTGTGTGT  
CGATCTGGATTCACTCACTCACTCATTCCCTCACTCATCCAGCCACCTAAAAACATTTACTGACCATGTACTAC  
GTGCCAGCTCTAGTTTTAGCCTTGGGAGGTTTTATTCTGACTTCCTCTGATTTTGGCATGTGGAGACACTCCTA  
TAAGGAGAGTTCAAGCCTGTGGGAGTAGAAAAATCTCATTCCCAGAGTCAGAGGAGAAGAGACATGTACCTTGAC  
CATCGTCTCTCTCAAGCTAGCCAGAGGGTGGGAGCCTAAGGAAGCGTGGGGTAGCAGATGGAGTAATGGTCA  
CGAGGTCCAGACCCACTCCCAAAGCTCAGACTTGCCAGGCTCCCTTTCTCTTCTTCCCCAGGTCTCTCTTTAGG  
TCTGTTGTGTGACCATCTGCTTGTTGGCTGGCAGCTGAGAGCCCTGCTGTGGGAGAGCGAAGGGGGTCAAAGG  
AAGACTTGAAGCACAGAGGGCTAGGGAGGTGGGTACATTTCTCTGAGCAGTCAGGGTGGGAAGAAAGAATGCAA  
GAGTGGACTGAATGTGCCTAATGGAGAAGACCCACGTGCTAGGGGATGAGGGGCTTCTGGGTCTGTTCCTAC  
CCCATTTGTGGTCACAGCCATGAAGTACC GGATGAACCTATCCTTCCAGTGGCTCGCTCCCTGTAGCTCTGCC  
TCCCTCTCCATATCTCCTTCCCTACACCTCCCTCCCCACACCTCCCTACTCCCTGGGCATCTTCTGGCTTGAC  
TGGATGGAAGGAGACTTAGGAACCTACCAGTTGGCCATGATGTCTTTCTT

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**FIGURE 4819A**

CCCTTCACGACCGTCACCATGGAAGTGTACCATTGCAGCCTGTAAATGAAAATATGCAAGTCAACAAAATAAAG  
AAAAATGAAGATGCTAAGAAAAGACTGTCTGTTGAAAGAATCTATCAAAAGAAAACACAATTGGAACATATTTTG  
CTCCGCCAGACACCTACATTGGTTCTGTGGAATTAGTGACCCAGCAAATGTGGGTTTACGATGAAGATGTTGGC  
ATTAACATAGGGGAAGTCACTTTTGTCTGGTTTGTACAAAATCTTTGATGAGATTCTAGTTAATGCTGCGGAC  
AACAAAACAAGGGACCCAAAATGTCTGTATTAGAGTCACAATTGATCCGGAACAAATTTAATTAGTATATGG  
AATAATGGAAGGTATTCTGTGTGTTGAACACAAAGTTGAAAAGATGTATGTCCAGCTCTCATATTTGGACAG  
CTCCTAACTTCTAGTAACATATGATGATGATGAAAAGAAAGTGACAGGTGGTTCGAAATGGCTATGGAGCCAAATTG  
TGTAACATATTCAGTACCAAATTTACTGTGGAACAGCCAGTAGAGAATACAAGAAAATGTTCAAACAGACATGG  
ATGGATAATATGGGAAGAGCTGGTGAGATGGAACCAAGCCCTTCAATGGAGAAGATTATACATGTATCACCTTT  
CAGCCTGATTTGTCTAAGTTTAAATGCAAAGCCTGGACAAAGATATTGTTGCACTAATGGTCAGAAGAGCATAT  
GATATTGCTGGATCCACCAAAGATGTCAAAGTCTTTCTAATGGAAATAAACTGCCAGTAAAAGGATTTCTGTAGT  
TATGTGGACATGTATTTGAAGGACAAGTTGGATGAACTGGTAACCTCTTGAAAGTAATACATGAACAAGTAAAC  
CACAGGTGGGAAGTGTGTTAACTATGAGTGAAAAGGCTTTCAGCAAATTAGCTTTGTCAACAGCATTGCTACA  
TCCAAGGGTGGCAGACATGTTGATTATGTAGCTGATCAGATTGTGACTAACTTGTGTGATGTTGTGAAGAAGAAG  
AACAAAGGGTGGTGTGTCAGTAAAAGCACATCAGGTGAAAATCACATGTGGATTTTTGTAAATGCCTTAATTGAA  
AACCCAACCTTTGACTCTCAGACAAAAGAAAACATGACTTTACAACCCAAGAGCTTTGGATCAACATGCCAATTG  
AGTGAAAATTTATCAAAGCTGCCATTGGCTGTGGTATTGTAGAAAGCATACTAACTGGGTGAAGTTTAAAGGCC  
CAAGTCCAGTTAAACAAGAAGTGTTCAGCTGTAAACATAATAGAATCAAGGGAATTCCCAAACCTCGATGATGCC  
AATGATGCAGGGGGCCGAAACTCCACTGAGTGACGCTTATCTGACTGAGGGAGATTGAGCCAAAACCTTTGGCT  
GTTTCAGGCCCTTGGTGTGGTTGGGAGAGACAAATATGGGGTTTTCCCTCTTAGAGGAAAAATACTCAATGTTTGA  
GAAGCTTCTCATAAGCAGATCATGAAAATGCTGAGATTAACAATATCATCAAGATTGTGGGTCTTCAGTACAAG  
AAAACTATGAAGATGAAGATTCAATGAAGACGCTTCGTTATGGGAAGATAATGATTATGACAGATCAGGACCAA  
GATGGTTCCACATCAAAGGCTTGCTGATTAATTTTATCCATCACAACTGGCCCTCTCTCTGCGACATCGTTTT  
CTGGAGGAATTTATCACTCCCATTGTAAAGGTATCTAAAAACAAGCAAGAAATGGCATTTTACAGCCTTCCTGAA  
TTTGAAGAGTGAAGAGTTCTACTCCAAATCATAAAAATGGAAGTCAAATATTACAAAGGTTTGGGCACCAGC  
ACATCAAAGGAAGCTAAAGAATACTTGCAGATATGAAAAGACATCGTATCCAGTTCAAATATTCTGGTCTGAA  
GATGATGCTGCTATCAGCCTGGCCTTAGCAAAAAACAGATAGATGATCGAAAGGAATGGTTAACTAATTTTCATG  
GAGGATAGAAGACAACGAAAGTTACTTGGGCTTCCTGAGGATTACTTGTATGGACAACTACCACATATCTGACA  
TATAATGACTTTCATCAACAAGGAACCTTATCTTGTCTCAAATTCGTATAACGAGAGATCTATCCCTTCTATGGTG  
GATGGTTTTGAAACCAGGTGAGAGAAAGGTTTTGTTTACTTGCTTCAAACGGAATGACAAGCGAGAAGTAAAGGTT  
GCCCAATTAGCTGGATCAGTGGCTGAAATGTCTTCTTATCATCATGGTGAGATGTCCTAATGATGACCATTATC  
AATTTGGCTCAGAATTTTGTGGGTAGCAATAATCTAAACCTCTTGACGCCATTGGTCAGTTTGGTACCAGGCTA  
CATGGTGGCAAGGATTCTGCTAGTCCACGATACATCTTTACAATGCTCAGCTCTTTGGCTCGATTGTTATTTCCA  
CCAAAAGATGATCACACGTTGAAGTTTTTATATGATGACAACCAGCGTGTGAGCCTGAATGGTACATTCCTATT  
ATTCCCATGGTGCTGATAAATGGTGCTGAAGGAATCGGTACTGGGTGGTCTGCAAAATCCCCAACCTTGATGTG  
CGTGAAATTGTAAATAACATCAGGCGTTTGATGGATGGAGAAGAACCCTTTGCCAATGCTTCCAAGTTACAAGAAC  
TTCAAGGGTACTATTGAAGAACTGGCTCCAAATCAATATGTGATTAGTGGTGAAGTAGCTATTCTTAATTCTACA  
ACCATTGAAATCTCAGAGCTTCCCGTCAGAACATGGACCCAGACATACAAAGAACAAGTTCTAGAACCATGTTG  
AATGGCACCAGAGAAGACACCTCCTCTCATAACAGACTATAGGGAATACCATACAGATACCACTGTGAAATTTGTT  
GTGAAGATGACTGAAGAAAACTGGCAGAGGCAGAGAGATTGGACTACACAAAGTCTTCAAACCTCCAACTAGT  
CTCACATGCAACTCTATGGTGTCTTTTGACCACGTAGGCTGTTTAAAGAAATATGACACGGTGTGGATATTCTA  
AGAGACTTTTTTGAACCTCAGACTTAAATATTATGGATTAAGAAAAGAAATGGCTCCTAGGAATGCTTGGTGCTGAA  
TCTGCTAAACTGAATAATCAGGCTCGCTTTATCTTAGAGAAAATAGATGGCAAAATAATCATTGAAAATAAGCCT  
AAGAAAGAAATTAATTAAGTTCTGATTGAGAGGGGATATGATTGCGATCCTGTGAAGGCCTGGAAAGAAGCCAG  
CAAAAGGTTCCAGATGAAGAAGAAAATGAAGAGAGTGACAACGAAAAGGAACTGAAAAGAGTGACTCCGTAACA  
GATTCTGGACCAACCTTCAACTATCTTCTTGATATGCCCCCTTTGGTATTTAACCAGGAAAAGAAAGATGAACCT  
TGCAGGCTAAGAAATGAAAAGAAACAAGAGCTGGACACATTAAGAAAGAGTCCATCAGATTTGTGGAAAGAA  
GACTTGGCTACATTTATTGAAGAATTGGAGGCTGTTGAAGCCAAGGAAAACAAGATGAACAAGTCGGAATTCCT

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**FIGURE 4819B**

GGGAAAGGGGGAAGGCCAAGGGGAAAAAACACAAATGGCTGAAGTTTTGCCTTCTCCGCGTGGTCAAAGAGTC  
ATTCCACGAATAACCATAGAAATGAAAGCAGAGGCAGAAAAGAAAAATAAAAAGAAAATTAAGAATGAAAACTACT  
GAAGGAAGCCCTCAAGAAGATGGTGTGGAAGTGAAGGCCTAAAAACAAAGATTAGAAAAGAAACAGAAAAGAGAA  
CCAGGTACAAAGACAAAGAAACAAACTACATTGGCATTAAAGCCAATCAAAAAAGGAAAGAGAGAAATCCCTGG  
TCTGATTGAGAATCAGATAGGAGCAGTGACGAAAGTAATTTTGATGTCCCTCCACGAGAAACAGAGCCACGGAGA  
GCAGCAACAAAAACAAAATTACAAATGGATTGGATTGAGATGAAGATTCTCAGATTTTGATGAAAAAAGTATGAT  
GATGAAGATTTTGTCCCATCAGATGCTAGTCCACCTAAGACCAAACTTCCCCAAAAGTATGTAACAAAGAACTG  
AAACCACAGAAAAGTGTGCTGTCAGACCTTGAAGCTGATGATGTTAAGGGCAGTGATCCACTGTCTTCAAGCCCT  
CCTGCTACACATTTCCAGATGAAACTGAAATTACAAACCCAGTTCCATAAAAAGAAATGTGACAGTGAAGAAGACA  
GCAGCAAAAAGTCAGTCTTCCACCTCCACTACCGGTGCCAAAAAAGGGCTGCCCAAAAGGAACTAAAAGGGAT  
CCAGCTTTGAATTCGGTGTCTCTCAAAAGCCTGATCCTGCCAAAACCAAGAATCGCCGCAAAAGGAAGCCATCC  
ACTTCTGATGATTCTGACTCTAATTTTGAGAAAATTGTTTCGAAAGCAGTCACAAGCAAGAAATCCAAGGGGAG  
AGTGATGACTTCCATATGGACTTTGACTCAGCTGTGGCTCCTCGGGCAAAATCTGTACGGGCAAGAAACCTATA  
AAGTACCTGGAAGAGTCAGATGAAGATGATCTGTTTTAAATGTGAGGCGATTATTTTAAGTAATTATCTTACCA  
AGCCCAAGACTGGTTTTAAAGTTACCTGAAGCTCTTAAGTTCTCCCTCTGAATTTAGTTTGGGGAAGGTGTTT  
TTAGTACAAGACATCAAAGTGAAGTAAAGCCCAAGTGTCTTTAGCTTT

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**FIGURE 4820**

GCCATCTGGGCCCAGGCCCATGCCCCGAGGAGGGGTGGTCTGAAGCCCACCAGAGCCCCCTGCCAGACTGTCTG  
CCTCCCTTCTGACTGTGGCCGCTTGGCATGGCCAGCAACAGCAGCTCCTGCCCCGACACCTGGGGGCGGGCACCTC  
AATGGGTACCCGGTGCCTCCCTACGCCTTCTTCTTCCCCCTATGCTGGGTGGACTCTCCCCGCCAGGCGCTCTG  
ACCACTCTCCAGCACCAGCTTCCAGTTAGTGGATATAGCACACCATCCCCAGCCACCATTGAGACCCAGAGCAGC  
AGTTCTGAAGAGATAGTGCCAGCCCTCCCTCGCCACCCCTCTACCCCGCATCTACAAGCCTTGCTTTGTCTGT  
CAGGACAAGTCTCAGGCTACCACTATGGGGTCAGCGCCTGTGAGGGCTGCAAGGGCTTCTTCCGCCGAGCATC  
CAGAAGAACATGGTGTACACGTGTACCGGGACAAGAACTGCATCATCAACAAGGTGACCCGGAACCGCTGCCAG  
TACTGCCGACTGCAGAAGTGCTTTGAAGTGGGCATGTCCAAGGAGTCTGTGAGAAACGACCGAAACAAGAAGAAG  
AAGGAGGTGCCCAAGCCCGAGTGCTCTGAGAGCTACACGTGACGCCGGAGGTGGGGGAGCTCATTGAGAAGGTG  
CGCAAAGCGCACCAGGAAACCTTCCCTGCCCTCTGCCAGCTGGGCAAATACACTACGAACAACAGCTCAGAACAA  
CGTGTCTCTCTGGACATTGACCTCTGGGACAAGTTCACTGAAGTCTCCACCAAGTGCATCATTAAAGACTGTGGAG  
TTGCCAAGCAGCTGCCCGGCTTCAACCCCTCACCATCGCCGACCAGATCACCTCCTCAAGGCTGCCTGCCTG  
GACATCCTGATCCTGCGGATCTGCACGCGGTACACGCCCAGCAGGACACCATGACCTTCTCGGACGGGCTGACC  
CTGAACCGGACCCAGATGCACAACGCTGGCTTCGGCCCCCTCACCGACCTGGTCTTTGCCTTCGCCAACAGCTG  
CTGCCCTTGAGATGGATGATGCGGAGACGGGGTGCTCAGCGCCATCTGCCTCATCTGCGGAGACCGCCAGGAC  
CTGGAGCAGCCGGACCGGGTGGACATGCTGCAGGAGCCGCTGCTGGAGGCGCTAAAGGTCTACGTGCGGAAGCGG  
AGGCCCAGCCGCCCCACATGTTCCCAAGATGCTAATGAAGATTACTGACCTGCGAAGCATCAGCGCAAGGGG  
GCTGAGCGGGTGATCACGCTGAAGATGGAGATCCCGGGCTCCATCGCGCTCTCATCCAGGAAATGTTGGAGAAC  
TCAGAGGGCTTGACACTCTGAGCGGACAGCCGGGGGTGGGGGGCGGGACGGGGTGGCCTGGCCCCCCCCCCA  
GGCAGCTGTAGCCCCAGCCTCAGCCCCAGCTCCAACAGAAGCAGCCGGCCACCCACTCCCCGTGACCGCCCCACG  
CCACATGGACACAGCCCTCGCCCTCCGCCCCGGCTTTTCTCTGCCTTTCTACCGACCATGTGACCCCGCACCAGC  
CCTGCCCCCACCCTGCCCTCCCGGGCAGTACTGGGACCTTCCCTGGGGGACGGGGAGGAGGAGGCAGCGACTCC  
TTGGACAGAGGCTTGGGCCCTCAGTGGACTGCCTGCTCCACAGCCTGGGCTGACGTGAGAGCCGAGGCCAGGA  
ACTGAGTGAGGCCCCCTGGTCTGGGTCTCAGGATGGGTCTGGGGGCTCGTGTTTCATCAAGACACCCCTCTGCC  
CAGCTCACCACATCTTCATCACCAGCAAACGCCAGGACTTGGCTCCCCATCCTCAGAACTCACAAGCCATTGCT  
CCCCAGCTGGGGAACCTCAACCTCCCCCTGCCTCGGTTGGTGACAGAGGGGTGGGACAGGGGCGGGGGTTCC  
CCCTGTACATACCCTGCCATACCAACCCCAGGTATTAATTCTCGCTGGTTTTGTTTTTATTTTAAATTTTTTGT  
TTGATTTTTTTAATAAGAATTTTCATTTTAAGCACATTTATACTGAAGGAATTTGTGCTGTGTATTGGGGGAGC  
TGGATCCAGAGCTGGAGGGGGTGGGTCCGGGGGAGGGAGTGGCTCGGAAGGGGCCCCCACTCTCCTTTCATGTCC  
CTGTGCCCCCAGTTCTCCTCCTCAGCCTTTTCCCTCCTCAGTTTTCTCTTTAAACTGTGAAGTACTAAGTTTCC  
AAGGCCTGCCTTCCCCTCCCTCCCACTGGAGAAGCCGCCAGCCCCCTTCTCCCTCTGCCTGACCACTGGGTGTGG  
ACGGTGTGGGGCAGCCCTGAAAGGACAGGCTCCTGGCCTTGGCACTTGCCCTGCACCCACCATGAGGCATGGAGCA  
GGGCAGAGCAAGGGCCCCGGGACAGAGTTTTCCAGACCTGGCTCCTCGGCAGAGCTGCCTCCCGTCAGGGCCCA  
CATCATCTAGGCTCCCCAGCCCCACTGTGAAGGGGCTGGCCAGGGGCCCCGAGCTGCCCCACCCCCGGCTCAG  
CCACCAGCACCCTCATAGGGCCCCCAGACACCACACATGCGCGTGCGCACACACACAAACACACACACTGG  
ACAGTAGATGGCCGACACACACTTGGCCCGAGTTCCCTCCATTTCCCTGGCCTGCCCCCACCCTAACCTGTCC  
CACCCTCGTGCCCCCTCCTTACCCCGCAGGACGGGCTACAGGGGGTCTCCCTCACCCTGCACCCCAAGCTG  
GGGGAGCTGGCTCTGCCCCGACCTCCTTACCAGGGGTGGGGCCCCCTTCCCTGGAGCCCCGTGGGTGCACCTGT  
TACTGTTGGGCTTTCCACTGAGATCTACTGGATAAAGAATAAAGTTCTATTTATTCT



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**FIGURE 4821**

MASNSSSCPTFGGGHLNGYPVPPYAFFFPMLGGLSPPGALTTLQHQLPVSGYSTPSPATIIETQSSSSEEIVPSP  
PSPPLPRIYKPCFVCQDKSSGYHYGVSACEGCKGFFRRSIQKNMVYTCRDKNCIINKVTRNRCQYCRLOKCFE  
VGMSKESVRNDRNKKKKEVPKPECSESYTLTPEVGELIEKVRKAHQETFPALCQLGKYTTNNSSEQRVSLDIDLW  
DKFSELSTKCIIKTVEFAKQLPGFTTLTIADQITLLKAACLDILILRICTRYTPEQDTMTFSDGLTLNRTQMHNA  
GFGPLTDLVFAFANQLLPLEMDDAETGLLSAICLICGDRQDLEQPDRVDMLQEPLLEALKVYVRKRRPSRPHMFP  
KMLMKITDLRSISAKGAERVITLKMEIPGSMPLIQEMLENSEGLDTLSGQPGGGGRDGGGLAPPPGSCSPSLSP  
SSNRSSPATHSP

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**FIGURE 4822**

GC GCGCGCGGGC **ATG** GCTCGGGTGGCGTGGGGGCTGCTGTGGTTGCTGCTGGGCAGCGCCGGGGCGCAGTACGAGA  
AGTACAGCTTCCGGGGCTTCCGCCCCGAGGACCTGATGCCGCTGGCCGCGGCGTACGGGCACGCTCTGGAGCAGT  
ACGAGGGAGAGAGCTGGCGCGAGAGCGCGCTACCTGGAGGCGGCGCTGCGGCTGCACCGGCTCCTGCGCGACA  
GCGAGGGCTTCTGCCACGCCAACTGCAGCGGCCCCGCGCCCGCGGCCAAGCCCCGATCCCGACGGCGGCGCGCAG  
ACGAGTGGGCTTGCAGCTGCGGCTCTTCGGCCGCGTCTGGAGCGAGCCGCTGCCTGCGGCGCTGCAAGCGGA  
CGCTGCCCCGCTTCCAGGTGCCCTACCCGCGCGGCAGCTGCTGCGTGACTTCCAGAGCCGCTGCCCTACCAGT  
ACCTGCACTACGCGCTGTTCAAGGCTAACC GGCTGGAGAAGCGGTGGCGGCGGCTACACCTTCTCCAGAGGA  
ACCCGAAGCAGAGCTGACCGCCAAGTATCTCACTACTATCAGGGGATGCTGGACGTCGCCGACGAGTCCCTCA  
CGGACCTAGAGGCCCAGCCCTACGAGGCCGTGTTCTCCGGGCTGTGAAGCTCTACAACAGCGGGGATTTCGCA  
GCAGCAGGAGGACATGGAGCGGGCTTGTGAGAGTACCTGGCAGTCTTTGCCCGGTGCCTGGCCGGCTGTGAAG  
GGGCCCCATGAGCAGGTGGACTTCAAGGACTTCTACCCGGCCATAGCAGATCTCTTGCAGAGTCCCTGCAGTGCA  
AGGTGGACTGTGAGGCCAATTGACCCCCAATGTGGGTGGCTACTTCGTGGACAAGTTCGTGGCCACCATTGTACC  
ACTACCTGCAGTTTGCCTACTATAAGTTGAATGATGTGCGCCAGGCTGCCCGCAGCGCCGCCAGCTACATGCTCT  
TCGACCCCAAGGACAGCGTCATGCAGCAGAACCTGGTGTATTACCGGTTCCACCGGGCTCGCTGGGGCCTGGAAG  
AGGAGGACTTCCAGCCCCGGGAGGAGGCCATGCTCTACCACAACCAGACCGCCGAGCTGCGGGAGCTGCTGGAGT  
TCACCCACATGTACCTGCAGTCAGATGATGAGATGGAGCTGGAGGAGACAGAACCGCCCTGGAGCCTGAGGATG  
CCCTATCTGACGCCGAGTTTGAGGGGGAGGGTGACTACGAGGAGGGCATGTATGCTGACTGGTGGCAGGAGCCGG  
ATGCCAAGGGTGACGAGGCCGAGGCTGAGCCAGAGCCTGAAC TCGCAT **TG** AAGGGGACACCCACACCGCTCAA  
GCTTGGGAAGCCTGGTGCCGATGGCCCCACCCTCACCAGCCTGGGCAGCAGCAAGAACTATTTATTA AAAA CTTA  
AGATGGGCCAGGTGCGGTGGCTCACACCTGTAATCCAGCATTTTGGGAGGCCAAGGTGGGTGGATCACTTGAGG  
CCAGGAGTTCAAGACCAGCCTGGCCAACATGATGAGACCTCCGTCTCTACTAAAATACATAAATTAGCCGGGTGT  
GGTGGCAGGCGCCTGAAATCCCAGCTACTCAAGAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGCAAAGGT  
TGCGGTGAAC TGAGATTGCGCCACCGCACTCCAGCCTGGGCGACAGAGCGAGACTCCATCTTTAAAAAAAACAA  
GACGGGCCGGCAGGTGGCTCAGCCTGTAATCCAGCACTGAGAGGCCGATCACTTGAGGTCAGGAGTTCAAGA  
CCTGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAAATACAAAATTAGCCAGGCATGGTGGCACACACC  
TGTAATCGTAGCTGAGGCAGGAGAATCGCCTGAACCCAGGAGCGGAGCTTGCACTGAGCCGAGATCGTGCCACT  
GCACTCCAGCCTGGGCGACAGAGTGAGACTCCATCTCAAAAAAAAAAAAAAAAAA CTTAAGATGGACACAGCTGA  
CTGGACCCCCATCCTGCCTCACCATGGGTGCTGCACCCAGACCCATCCTGCCACTTCTATGTCTCTGGACCAC  
AGGATGGTGGTGGCATTGCAGGTTGGCAAGTGGGCTGATGGGGTCCGCCCTCCTCACTGCTGAGCTCCTCACCTG  
GACAGTCTCCTGGACAAGGAGTTTCCAGCTGCTGGCTGGAGTCTCAGGCCAAATTGCAGAGGGTCTCCAGGGTC  
CTGAAGAGCACTGGACTAAGAGTCTAGTGGTTCCAGGGCCCTGACCAGTAGGTGCTCAATAAATGTTTGTGTTG  
AATGAAAAAAAAAAAAAAAAA

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**FIGURE 4823**

MARVAVGLLWLLLGSAGAQYKYSFRGFPPEDLMPLAAAYGHAEQYEGESWRESARYLEAALRLHRLLRDSEAF  
CHANCSPAPAAKPDGGRADWACELRLFGRVLERAACLRCKRTLPAFQVPYPPRQLLRDFQSRLPYQYLHY  
ALFKANRLEKAVAAAYTFLQRNPKHELTAKYLNYYQGMLDVADESLTDLEAQPYEAVFLRAVKLYNSGDFRSSTE  
DMERALSEYLAVFARCLAGCEGAHEQVDFKDFYPAIADLFAESLQCKVDCEANLTPNVGGYFVDKFVATMYHYLQ  
FAYYKLNDVRQAARSAASYMLFDPKDSVMQQNLVYYRFHRRWGLEEEDFQPREEAMLYHNQTAEELRELFTHM  
YLQSDDEMELEETEPPEPEDALSDAEFEGEGDYEEGMYADWWQEPDAKGDEAEAEPEPELA

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**FIGURE 4824**

TCTTTCGCGGGCACTTCGAATTCTAGTCCCCTCCAGGCAGGAGCCCGGGCCGACGGAGAGGACTTAACGACACTA  
TCGGACCCCTCTGGGAAAAGAGGGGAGACGTCGTGACCCAGGCCCGCCCCACCTTGCCGCCTCGTGCCCGGCGCT  
AAGACCCAGCGGGCGCGCCGCCCGGGGCCCCGGCCCTGTCCCCTTCCGTCCGCGGGGCAGCCAGCTCAGCTC  
CGGAGAGCCGGCGGCGCGGGCATGGCTCGGGTGCGTGCGGGGCTGCTGTGGTTGCTGCTGGGCAGCGCCGGG  
GCGCAGTACGAGAAGTACAGCTTCCGGGGCTTCCCGCCGAGGACCTGATGCCGCTGGCCGCGGCGTACGGGCAC  
GCTCTGGAGCAGTACGAGGGAGAGAGCTGGCGCGAGAGCGCGCTACCTGGAGGCGGCGCTGCGGCTGCACCGG  
CTCCTGCGCGACAGCGAGGCCTTCTGCCACGCCAACTGCAGCGGCCCG

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**FIGURE 4825**

AGCTATGATCGCAACACCTTGGTGGCCATCGTGGTGGGTGTGGGGCGCCTCATCACTGGCATGGACCGAGGCCTC  
ATGGGCATGTGTGTCAACGAGCGGCGACGCCCTCATTGTGCCTCCCCACCTGGGGCTATGGGAGCATCGGCCTGGCG  
GGGCTCATTCCACCGGATGCCACCTCTACTTCGATGTGGTTCTGCTGGATGTGTGGAACAAGGAAGACACCGTG  
CAGGTGAGCACATTGCTGCGCCCGCCCCACTGCCCCCGCATGGTCCAGGACGGCGACTTTGTCCGCTACCACTAC  
AATGGCACCTTGCTGGACGGCACCTCCTTCGACACCAGCTACAGTAAGGGCGGCACCTTATGACACCTACGTGGGC  
TCTGGTTGGCTGATCAAGGGCATGGACCAGGGGCTGCTGGGCATGTGTCTGGAGAGAGAAGGAAGATTATCATC  
CCTCCATTCTGGCCTATGGCGAGAAAGGCTATGGGACAGTGATCCCCCACAGGCCTCGCTGGTCTTTACAGTC  
CTCCTGATTGACGTGCACAACCCGAAGGACGCTGTCCAGCTAGAGACGCTGGAGCTCCCCCGGCTGTGTCCGC  
AGAGCCGGGGCCGGGGACTTCATGCGCTACCACTACAATGGCTCCTTGATGGACGGCACCTCTTCGATTCCAGC  
TACTCCCCGAACCACACCTACAATACCTATATCGGGCAGGGTTACATCATCCCCGGGATGGACCAGGGGCTGCAG  
GGTGCCTGCATGGGGGAACGCCGGAGAATTACCATCCCCCGCACCTCGCCTATGGGGAGAATGGAAGTGGAGAC  
AAGATCCCTGGCTCTGCCGTGCTAATCTTCAACGTCCATGTCAATTGACTTCCACAACCCTGCGGATGTGGTGGAA  
ATCAGGACACTGTCCCGGCCATCTGAGACCTGCAATGAGACCACCAAGCTTGGGGACTTTGTTTCGATACCAATTAC  
AACTGTTCTTTGCTGGACGGCACCCAGCTGTTACCTCGCATGACTACGGGGCCCCCAGGAGGCGACTCTCGGG  
GCCAACAGGTGATCGAAGGCCTGGACACGGGCTGCAGGGCATGTGTGTGGGAGAGAGGCGGCAGCTCATCGTG  
CCCCCGCACCTGGCCCACGGGGAGAGTGGAGCCCGGGAGTCCAGGCAGTGCTGTGCTGCTGTTTGAGGTGGAG  
CTGGTGTCCCGGGAGGATGGGCTGCCCACAGGCTACCTGTTTGTGTGGCACAAGGACCCTCCTGCCAACCTGTTT  
GAAGACATGGACCTCAACAAGGATGGCGAGGTCCCTCCGGAGGAGTTCTCCACCTTCATCAAGGCTCAAGTGAGT  
GAGGGCAAAGGACGCCTCATGCCTGGGCAGGACCCTGAGAAAACCATAGGAGACATGTTCCAGAACCAGGACCGC  
AACCAGGACGGCAAGATCACAGTCGACGAGCTCAAGCTGAAGTCAGATGAGGACGAGGAGCGGGTCCACGAGGAG  
CTCTGAGGGGCAGGGAGCCTGGCCAGGCCTGAGACACAGAGGCCCACTGCGAGGGGGACAGTGGCGGTGGGACTG  
ACCTGCTGACAGTCACCTCCCTCTGCTGGGATGAGGTCCAGGAGCCAACTAAAACAATGGCAGAGGAGACATCT  
CTGGTGTTCACCACCCTTAGATGAAAATCCACAGCACAGACCTCTACCGTGTCTCTTCCATCCCTAAACCAC  
TTCCTTAAATGTTTGGATTTGCAAAGCCAATTTGGGGCCTGTGGAGCCTGGGGTTGGATAGGGCCATGGCTGGT  
CCCCACCATACTCCCTCCACATCACTGACACAGCTGAGCTTGTTATCCATCTCCCCAACTTCTCTTTCTT  
TGTACTTCTTGTATCCCCACTCCCAGCCCCCTTTCTCTATGTGACAGCTCCCTAGGACCCCTCTGCCTTCCTC  
CCCAATCCTGACTGGCTCCTAGGGAAGGGGAAGGCTCCTGGAGGGCAGCCCTACCTCTCCATGCCCTTTGCCCT  
CCTCCCTCGCCTCCAGTGGAGGCTGAGCTGACCCTGGGCTGCTGGAGGCCAGACTGGGCTGTAGTTAGCTTTTCA  
TCCCTAAAGAAGGCTCCTTTCCCTAAGGAACCATAGAAGAGAGGAAGAAAACAAAGGGCATGTGTGAGGGAAGCT  
GCTTGGGTGGGTGTTAGGGCTATGAAATCTTGATTTGGGGCTGAGGGGTGGGAGGGAGGGCAGAGCTCTGCACA  
CTCAAAGGCTAAACTGGTGTGAGTCCTTTTTTCCTTTGTTCCAAATAAAAGATTAAACC

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**FIGURE 4826**

GGGATGGCAGAGGAGGTGAGGAGGGAGGAAGCGTCCGGAGTGGGGCGGGCCCGGACTCCGACCCCCGGGGCGCTT  
CGAGCCCCCAGCTGGTCACCGAGGCACCGCCGCTTCACCCAGGCCAGTAGCCGCCCCCTCGCGCACCCCGGCC  
CGCCTCACACGCGCGCCCCGAGCGAGCCCCGGGCTCCCTCGGGCCAGCGTGGCGCAGGGGTTCAGTGGTTCTCTC  
GGGTCTCGGGACAGGTGAGCACCCCTGATGAAGGCCACGGTCTGATGCGGCAGCCTGGGCGGGTGCAGGAGATCG  
TGGGCGCCCTCCGCAAGGGCGGCGGAGACCGGTTACAGGTGATTTCTGATTTTGACATGACCTTGAGCAGGTTTG  
CATATAATGAAAAGCGATGCCCTTCTTCTTACAATATTCTGGATAATAGCAAGATCATCAGTGAGGAGTGTGCGGA  
AAGAGCTCACAGCGCTCCTTCACCACTATTACCCAATTGAGATCGACCCACACCGGACCGTCAAGGAGAAGCTAC  
CTCATATGGTGAATGGTGGACCAAAGCACACAATCTCCTATGTCAGCAGAAGATTCAGAAGTTTCAGATAGCCC  
AGGTGGTTAGAGAGTCCAATGCAATGCTCAGGGAGGGATATAAGACCTTCTTCAACACACTCTACCATAACAACA  
TTCCCCTTTTTCATCTTTTCTGCGGGCATTGGTGATATCCTGGAAGAAATTATCCGACAGATGAAAGTGTTCACC  
CCAACATCCACATCGTGTCTAACTACATGGATTTTAATGAAGATGGTTTTCTCCAGGGATTAAAGGGCCAGCTCA  
TACACACATAACAAGAACAGCTCTGCGTGTGAGAACTCTGGTTACTTCCAGCAACTTGAGGGCAAAACCAATG  
TCATCCTGCTGGGAGACTCTATCGGGGACCTCACCATGGCCGATGGGGTTCTGGTGTGCAGAACATTCTCAAAA  
TTGGCTTCCTGAATGACAAGGTGGAGGAGCGGCGGGAGCGCTACATGGACTCCTATGACATCGTGTGGAGAAGG  
ACGAGACTCTGGATGTGGTCAACGGGCTACTGCAGCACATCCTGTGCCAGGGGGTCCAGCTGGAGATGCAAGGCC  
CCTGAAGGCGCAGGCTCCAGCCCGGCTGCAGGCCGTGGTGAGGAGGGGCGCCTCCCCAGAGTCTGCTCCCCCGT  
GAACACAGAGCAGAGGCCAGGGTGGCCAGCAGTGGCTGGGTCTTCCGCGCCCTCCGTCTCTTTCCCTGAGC  
ACCTTCATCACCAGAGGCTTGAAGGAACCCCGCCATGTGGCAGGGCACAGGCACTGTTCTGGTGAACCTTGGAC  
CACAGCATGTCAGTGCTCTAGGGATTGTCTACTCCAGGGATTTCTTCAAATTTTAAACATGGGAAGTTCAA  
CAAATATAATGTGTGAAACAG

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**FIGURE 4827A**

CCGGATTTCGCGGGTTTCGTCGGGCCTGTGGAAGAAGCGCCGCGCACGGACTTCGGCAGAGGTAGAGCAGGTCTC  
TCTGCAGCCATGTTCGGCCAAGGCAATTTTCAGAGCAGACGGGCAAAGAATCCTTTACAAGTTCATCTGTACCACC  
TCAGCCATCCAGAATCGGTTCAAGTATGCTCGGGTCACTCCTGACACAGACTGGGCCCCGTTGCTGCAGGACCAC  
CCCTGGCTGCTCAGCCAGAACTTGGTAGTCAAGCCAGACCAGCTGATCAAACGTCGTGGAAAACCTTGGTCTCGTT  
GGGGTCAACCTCACTCTGGATGGGGTCAAGTCTGGCTGAAGCCACGGCTGGGACAGGAAGCCACAGTTGGCAAG  
GCCACAGGCTTCCTCAAGAATTTCTGATCGAGCCCTTCGTCCCCACAGTCAGGCTGAGGAGTTCTATGTCTGC  
ATCTATGCCACCCGAGAAGGGGACTACGTCTGTTCACCACGAGGGGGGTGTGGACGTGGGTGATGTGGACGCC  
AAGGCCCCAGAAGCTGCTTGTGGCGTGGATGAGAACTGAATCCTGAGGACATCAAAAAACACCTGTTGGTCCAC  
GCCCCGAAGACAAGAAAGAAATTTCTGGCCAGTTTTATCTCCGGCCTCTTCAATTTCTACGAGGACTTGTACTTC  
ACCTACCTCGAGATCAATCCCTTGTAGTGACCAAAGATGGAGTCTATGTCTTGACTTGGCGGCCAAGGTGGAC  
GCCACTGCCGACTACATCTGCAAAGTGAAGTGGGGTGACATCGAGTTCCCTCCCCCTTCGGGCGGGAGGCATAT  
CCAGAGGAAGCCTACATTGCAGACCTCGATGCCAAAAGTGGGGCAAGCCTGAAGCTGACCTTGCTGAACCCAAA  
GGGAGGATCTGGACCATGGTGGCCGGGGTGGCGCCTCTGTCTGTACAGCGATACCATCTGTGATCTAGGGGGT  
GTCAACGAGCTGGCAAACCTATGGGGAGTACTCAGGCGCCCCCAGCGAGCAGCAGACCTATGACTATGCCAAGACT  
ATCCTCTCCCTCATGACCCGAGAGAAGCACCAGATGGCAAGATCCTCATCATTGGAGGCAGCATCGCAAACCTTC  
ACCAACGTGGCTGCCACGTTCAAGGGCATCGTGAGAGCAATTCGAGATTACCAGGGCCCCCTGAAGGAGCACGAA  
GTCACAATCTTGTCCGAAGAGGTGGCCCCAACTATCAGGAGGGCTTACGGGTGATGGGAGAAGTCGGGAAGACC  
ACTGGGATCCCCATCCATGTCTTTGGCACAGAGACTCACATGACGGCCATTGTGGGCATGGCCCTGGGCCACCGG  
CCCATCCCCAACAGCCACCCACAGCGGCCCACTGCAAACCTCCTCCTCAACGCCAGCGGGAGCACATCGACG  
CCAGCCCCCAGCAGGACAGCATCTTTTTCTGAGTCCAGGGCCGATGAGGTGGCGCCTGCAAAGAAGGCCAAGCCT  
GCCATGCCACAAGATTCACTCCCAAGTCCAAGATCCCTGCAAGGAAAGAGCACCACCTCTTCAGCCGCCACACC  
AAGGCCATTGTGTGGGGCATGCAGACCCGGGCGGTGCAAGGCATGCTGGACTTTGACTATGTCTGCTCCCGAGAC  
GAGCCCTCAGTGGCTGCCATGGTCTACCTTTTACTGGGGACCACAAGCAGAAGTTTTACTGGGGGCACAAAGAG  
ATCCTGATCCCTGTCTTCAAGAACATGGCTGATGCCATGAGGAAGCATCCGGAGGTAGATGTGCTCATCAACTTT  
GCCTCTCTCCGCTCTGCCTATGACAGCACCATGGAGACCATGAACTATGCCCAGATCCGACCATCGCCATCATA  
GCTGAAGGCATCCCTGAGGCCCTCACGAGAAAGCTGATCAAGAAGGCGGACCAGAAGGGAGTGACCATCATCGGA  
CCTGCCACTGTTGGAGGCATCAAGCCTGGGTGCTTTAAGATTGGCAACACAGGTGGGATGCTGGACAACATCCTG  
GCCTCAAACGTGACCGCCAGGCAGCGTGGCCTATGTCTCACGTTCCGGAGGCATGTCCAACGAGCTCAACAAT  
ATCATCTCTCGGACCACGGATGGCGTCTATGAGGGCGTGGCCATTGTTGGGGACAGGTACCCGGGCTCCACATTC  
ATGGATCATGTGTTACGCTATCAGGACACTCCAGGAGTCAAATGATTGTGGTTCTTGGAGAGATTGGGGGCACT  
GAGGAATATAAGATTTGCCGGGGCATCAAGGAGGGCGCCTCACTAAGCCCATCGTCTGCTGGTGCATCGGGACG  
TGTGCCACCATGTTCTCTCTGAGGTCCAGTTTGGCCATGCTGGAGCTTGTGCCAACCAGGCTTCTGAAACTGCA  
GTAGCCAAGAACCAGGCTTTGAAGGAAGCAGGAGTGTGTTGTGCCCGGAGCTTTGATGAGCTTGGAGAGATCATC  
CAGTCTGTATACGAAGATCTCGTGGCCAATGGAGTCATTGTACCTGCCAGGAGGTGCCGCCCCCAACCGTGCCC  
ATGGACTACTCTGGGCCAGGGAGCTTGGTTTGATCCGCAAACCTGCCTCGTTCATGACCAGCATCTGCGATGAG  
CGAGGACAGGAGCTCATCTACGCGGGCATGCCCATCACTGAGGTCTTCAAGGAAGAGATGGGCATTGGCGGGGTC  
CTCGGCCTCCTCTGTTTCCAGAAAAGTTGCCTAAGTACTCTTGCCAGTTCATTGAGATGTGTCTGATGGTGACA  
GCTGATCACGGGCCAGCCGTCTCTGGAGCCCACAACACCATCATTTGTGCGCGAGCTGGGAAAGACCTGGTCTCC  
AGCCTCACCTCGGGGCTGCTCACCATCGGGGATCGGTTTGGGGGTGCCTTGGATGCAGCAGCCAAGATGTTTCACT  
AAAGCCTTTGACAGTGGCATTATCCCCATGGAGTTTGTGAACAAGATGAAGAAGGAAGGGAGCTGATCATGGGC  
ATTGGTCACCGAGTGAAGTCGATAAACAACCCAGACATGCGAGTGCAGATCCTCAAAGATTACGTGAGGCAGCAC  
TTCCCTGCCACTCCTCTGCTCGATTATGCACTGGAAGTAGAGAAGATTACCACCTCGAAGAAGCCAAATCTTATC  
CTGAATGTAGATGGTCTCATCGGAGTCGATTTGTAGACATGCTTAGAACTGTGGGTCTTTACTCGGGAGGAA  
GCTGATGAATATATTGACATTGGAGCCCTCAATGGCATCTTTGTGCTGGGAAGGAGTATGGGGTTTATTGGACAC  
TATCTTGATCAGAAGAGGCTGAAGCAGGGGCTGTATCGTCATCCGTGGGATGATATTTTATATGTTCTTCCGGAA  
CACATGAGCATGTAACAGAGCCAGGAACCCCTACTGCAGTAAACTGAAGACAAGATCTCTTCCCCCAAGAAAAAGT  
GTACAGACAGCTGGCAGTGGAGCCTGCTTTATTTAGCAGGGGCTGGAATGTAAACAGCCACTGGGGTACAGGCA  
CCGAAGACCAACATCCACAGGCTAACACCCCTTCAGTCCACACAAAGAAGCTTCATATTTTTTTTATAAGCATAG

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**FIGURE 4827B**

AAATAAAAACCAAGCCAATATTTGTGACTTTGCTCTGCTACCTGCTGTATTTATTATATGGAAGCATCTAAGTAC  
TGTCAGGATGGGGTCTTCCTCATTGTAGGGCGTTAGGATGTTGCTTTCTTTTCCATTAGTTAAACATTTTTC  
TCCTTTGGAGGAAGGGAATGAAACATTTATGGCCTCAAGATACTATAACATTTAAAGCACCCCAATGTCTCTCTT  
TTTTTTTTTACTTCCCTTTCTTCTCCTTATATAACATGAAGAACATTGTATTAATCTGATTTTTAAAGATCTT  
TTGTATGTTACGTGTTAAGGGCTTGTTTGGTATCCCACTGAAATGTTCTGTGTTGCAGACCAGAGTCTGTTTAT  
GTCAGGGGGATGGGGCCATTGCATCCTTAGCCATTGTCACAAAATATGTGGAGTAGTAACTTAATATGTAAAGTT  
GTAACATACATACATTTAAAATGGAAATGCAGAAAGCTGTGAAATGCTTGTGTCTTATGTTCTCTGTATTATG  
CAGCTGATTTGTCTGTCTGTAAGTGAAGTGTGGGTCCAAGGACTCCTAACTACTTTGCATCTGTAATCCACAAAG  
ATTCTGGGCAGCTGCCACCTCAGTCTCTTCTCTGTATTATCATAGTCTGGTTTAAATAAACTATATAGTAACA



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**FIGURE 4828**

MSAKAISEQTGKELLYKFICTTSAIQNRFKYARVTPD TDWARLLQDHPWLLSQNLVVKPDQLIKRRGKLGVLGVN  
LTLDGVKSWLKPRLGQEATVGKATGFLKNFLIEPFVPHSQAEFYVCIYATREGDYVLFHHEGGVDVGDVDAKAQ  
KLLVGVDEKLNPEIDIKHLLVHAPEDKKEILASFISGLNFYEDLYFTYLEINPLVVTKDGVYVLDLAAKVDATA  
DYICKVKWGDIEFPPPF GREAYPEEAYIADLDAKSGASLKLTLNPKGRIWTMVAGGGASVVYSDTICDLGGVNE  
LANYGEYSGAPSEQQTYDYAKTILSLMTREKHPDGKILIIIGGSIANFTNVAATFKGIVRAIRDYQGPLKEHEVTI  
FVRRGGPNYQEGLRVMGEVGKTTGPIHVFGTETHMTAIVGMALGHRP IPNQPTAAHTANFLLNASGSTSTPAP  
SRTASFSESRADEVAPAKKAKPAMPQDSVPSRSLQGKSTTLFSRHTKAIVWGMQTRAVQGMLDFDYVCSRDEPS  
VAAMVYPFTGDHKQKFYWGHEILIPVFKNMADAMRKHPEVDVLINFASLRSAYDSTMETMNYAQIRTIAIIAEG  
IPEALTRKLIK KADQKGVTTIGPATVGGIKPGCFKIGNTGMLDNILASKLYRPGSVAYVSRSGGMSNELNNIIS  
RTTDGVYEGVAIGGDRYPGSTFMDHVLRYQDTPGVKMIVVLGEIGGTEEYKICRGIKEGRLSTPVVCWIGTCAT  
MFSSEVQFGHAGACANQASETAVAKNQALKEAGVFVPRSFDELGEIIQSVYEDLVANGVIVPAQEVPPPTVPM DY  
SWARELGLIRKPASFMTSICDERGQELIYAGMPITEVFKEEMGIGGVLGLLWFQKRLPKYSCQFIEMCLMVTADH  
GPAVSGAHNTIICARAGKDLVSSLTSGLLTIGDRFXGCLGSSQDVQ

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**FIGURE 4829**

GGCTGAGGGGAGGGCCGTTGGCCGGGGCCTGCGGTACGCCGCTTCAGTGAGGGACGCCACTGCGGCCACCCGGCT  
TGCTGCCCTTCCTGGGCGCCACTCCCCAGGCGACCCGACGCGACGCGCCAGCAGCGCAGCACCATTCTCTCGG  
GCTCTTGGGCGCTGCTCTGAGCAGCGTCACCCTTTACACCAGAAAAGCTGGCGGGCACTATGGGGAAAAAACAAA  
CAAGAAGAAAGTGAGGAGGTGCTAGAAGAGGAGGAAGAGGAATATGTGGTGGAAAAAGTTCTCGACCGTCGAGT  
GGTAAAGGGCAAAGTGAGTACCTCCTAAAGTGGAAGGGATTCTCAGATGAGGACAACACATGGGAGCCAGAAGA  
GAACCTGGATTGCCCCGACCTCATTGCTGAGTTTCTGCAGTCACAGAAAACAGCACATGAGACAGATAAATCAGA  
GGGAGGCAAGCGCAAAGCTGATTCTGATTCTGAAGATAAGGGAGAGGAGAGCAAACCAAAGAAGAAGAAAGAAGA  
GTCAGAAAAGCCACGAGGCTTTGCTCGAGGTTTGGAGCCGGAGCGGATTATTGGAGCTACAGACTCCAGTGAGAGA  
GCTCATGTTCTGATGAAATGGAAAACTCTGATGAGGCTGACCTGGTCCCTGCCAAGGAAGCCAATGTCAAGTG  
CCCACAGGTTGTCTATATCCTTCTATGAGGAAAGGCTGACGTGGCATTCTACCCCTCGGAGGATGATGACAAAA  
AGATGACAAGAATAACGCTCCTGAGTACCAGCCCTGTACATCTGACTGTGGGTTTCAAGTGGGAAGGGAAGG  
AGTTCTACTTGTCTTGACACCATAGAGGTGGCTTGAGAAGATGTCCTTTGAAGAGCCAGTATAGTTTCTGTGCC  
TGCAGCAGCCCAAGTGCTTTAAAGCCGTTTCAAGCTGTATAGTTTGCACACCCATCCCAAGTGAGGGGAAAGGGG  
ATAAGTGTTCAGGCAACCTTTTCTGCACTTTGTGCGAAAAGCAAAGGGCCTTCTATGAAGGACAAAACTTGC  
AGAATTGGGTGTGTGGGAGAGCAAAAAATACTGTAGATCTTCAAAGAGCATCTCCACAACCCACAGCCTTCTTC  
CCAATAGTGTAACTCTGCATTTTTACAGCGTAGCATGTGTAGTTTTTGGCTATTACTGGTGTATTATTGGG  
GGAGGGAGGGATGGGGAGGGGAGAAAGGGAGATGGGTAGCATCATTTTGATTAAACATTTGGGGCTGATAGGGGA  
AATGGTGAAGCAATGGAAGAAGACAGACAATAATGATTGCTTCTATGTCCAGAATATTTTACCTTTAAAAAAA  
TGTCATTGGCACCATAAATAAGGACTGTGAGAGACTGTTTAAAGCTGTGAAAGTCTGAAACCTATAAGCCAAGG  
TGTTCCCTGCCTAACTTATTGCTGTTCCACAAAGGACTAAGCCTGTTTATAAGTTACCAAAGTTGCCATTTTG  
GAGATGGAAATTGACGAGGAGGGAAGGTCTTTTATTGGAGAGTATACAGTACAAGCAGATCATTCTGCCTTAGAG  
GTGCTAATTCCCGAAATTAGAAGACCCTTTCTTTTCCAGTAACGAAGTTATAAATATCAGCTTGTTTCATCCAAGC  
CACTGGCTGAGGTGTTAGGAAGAGGAAGAGGGTGGTAGAGGAGGTAAGACAGTAGGGAAAGACAAGGGCCCATGC  
TCTTAGTGGGAAAACCTCTGGAGCCGTTTACTTTGAGCTTTGAACACTGAAACCATTGTTGGCAGGGTTTCAGTC  
ACTGACAGCACAAGTTTCACTGAATTGATCCAAGAGTTTAGTGATTTCAAAGCCTTGGTCTCAGGAGAAGATTA  
AACTTTTCATATTGGGCAGTGGTTCACTTTAAACACACACATACACACAAAAACAATTTTTTAAGAAATCCTAA  
TAAGTAACATAACCAAAATGCTCTGTCTTGAGTCATGAGAACCATCAGTTCTTGATATTGTCTAGACTTGCATCT  
AGAGCTACGTTGTAAAATCTTTTAGGCATGTGTTAGATTTCTGTGTAACTTTGTTTAAATGTAACTTCATAC  
TACATTGTCAGTTTTTGTCTTAATAAACTATAGATTTAT

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**FIGURE 4830**

CTGAAGCGGAAGTGGAGGAAAAGATGGAGGACCATCAGCACGTGCCCATCGACATCCAGACCAGCAAGCTGCTCGA  
TTGGCTGGTGGACAGAAGGCACTGCAGCCTGAAATGGCAGAGTCTGGTGCTGACGATCCGCGAGAAGATCAATGC  
TGCCATCCAGGACATGCCAGAGAGCGAAGAGATCGCCACGTGCTGTCTGGGTCTACATTACTACTTTTCACTG  
CCTAAGAATCCTGGACCTTCTCAAAGGCACAGAGGCCTCCACGAAGAATATTTTTGGCCGATACTCTTCACAGCG  
GATGAAGGATTGGCAGGAGATTATAGCTCTGTATGAGAAGGACAACACCTACTTAGGTAAAGTGGCCCGCCTGG  
GAGCCCTGGTATCCATGGGGAAGCCCACTCTCAGAGTTCTGAGATACCAGGCTTATAGGAGGCACAGTCTGTGAG  
TGGGAAGAGACTGGAGTGTAGATGTTGCCCATTTGTAGGTGGTAAATCAATTGTTTTTGTATGGAATTGATTTTC  
CCTGAGTGGAGTGTCTGGGGAAGGAGGAGTCCAGGCCGCTAGTGGCCATTGCGCGTGCCTCAGCGAGCAGGTGT  
GTGTGGTCTCTCCACCACTCACCTCTTGTTAGCGGGAGTGTGCTGCCCCACCCCCACCCCCGACCCCCATT  
TACACAAGGCAGAAGAGGCACGGGTTTTCTGGGAGCGAATATCAAGTGCCTGAGAGCAACTACAGGACTAAGT  
TGTTTTGGTGGTGTAGTATAAATAATAATGGCTAATATTTCTGAGCATCTACTAAATGCAAGGAATTGT  
GCTTGGTGTGTATGTGGATTCTCTCTTCATCTTATGATAAAATGTTATTGTGCTGTTTTACCGATGAGGGTT  
GGATTAGAGGGGTTAAACAACCTTGTCTTAGGCTCCACAGCTGGGAACAAGTGGGGCTGGGAAGCTGACTTCGTGC  
TCTTACCACCACAAAGGATGTTGTGTGCATCTCTGGGGCATGCTGCTCATGTGGGGGTGTCTGGGCTGAATTT  
CCTGGGCATTTCTCAGTGGAACTCTCTAGCCTCCTGGTTGCGAATGTCAACTATGAGATCCCTCACTGAAGAAG  
CAGATTGCCAAGTGCCAGCAGCTGCAGCAAGAATACAGCCGCAAGGAGGAGGAGTGCCAGGCAGGGGCTGCCGAG  
ATGCGGGAGCAGTTCTACCACTCCTGCAAGCAGTATGGCATCACGGGCGAAAATGTCCGAGGAGAAGTGTGGCC  
CTGGTGAAGGACCTGCCGAGTCACTGGCTGAGATTGGGGCAGCGGCTCAGCAGTCCCTGGGGGAAGCCATTGAC  
GTGTACCAGGCGTCTGTGGGGTTTGTGTGTGAGAGCCCCACAGAGCAGGTGTTGCCAATGTGCGGTTTCGTGCAG  
AAGCGGGGAACTCAACGGTGTACGAGTGGAGGACAGGGACAGAGCCCTCTGTGGTGAACGACCCACCTCGAG  
GAGCTTCTGAGCAGGTGGCAGAAGATGCGATTGACTGGGGCGACTTTGGGGTAGAGGCAGTGTCTGAGGGGACT  
GACTCTGGCATCTCTGCCGAGGCTGTGGAATCGACTGGGGCATCTTCCCGAATCAGATTCAAAGGATCCTGGA  
GGTGTATGGGATAGACTGGGGAGACGATGCTGTTGCTTTGCAGATCACAGTGTGGAAGCAGGAACCCAGGCTCCA  
GAAGGTGTTGCCAGGGGCCAGATGCCCTGACACTGCTTGAATACACTGAGACCCGGAATCAGTTCCTTGATGAG  
CTCATGGAGCTTGAGATCTTCTTAGCCAGAGAGCAGTGGAGTTGAGTGAGGAGGCAGATGTCTGTCTGTGAGC  
CAGTTCAGCTGGCTCCAGCCATCCTGCAGGGCCAGACCAAGAGAAGATGGTTACCATGGTGTGAGTGTGGAG  
GATCTGATTGGCAAGCTTACCAGTCTTCAGCTGCAACACCTGTTTATGATCCTGGCCTACCAAGGTATGTGGAC  
CGAGTGACTGAATTCCTCCAGCAAAAGCTGAAGCAGTCCAGCTGCTGGCTTTGAAGAAAGAGCTGATGGTGCAG  
AAGCAGCAGGAGGCACTTGAGGAGCAGGCGGCTCTGGAGCCTAAGCTGGACCTGCTACTGGAGAAGACCAAGGAG  
CTGCAGAAGCTGATTGAAGCTGACATCTCCAAGAGGTACAGCGGGCGCCCTGTGAACCTGATGGGAACCTCTCTG  
**TGAC**ACCCTCCGTGTTCTTGCTGCCATCTTCTCCGCTTTGGGATGAAGATGATAGCCAGGGCTGTTGTTTTG  
GGGCTTTCAAGGCAAAAGACCAGGCTGACTGGAAGATGGAAGCCACAGGAAGGAAGCGGCACCTGATGGTGTAT  
CTTGGCACTCTCCATGTTCTCTACAAGAAGCTGTGGTGTATGGCCCTGTGGTCTACCAGGCGAAAACCACAGATT  
CTCCTTCTAGTTAGTATAGCGGACTTAATAAAAGAGGAAAAAACAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4831**

MCVHPGACLPHVGVSWAEFPGHFSVELSSLLVRNVNVEIPSLKKQIAKCQQLQQEYSRKEEECQAGAAEMREQFY  
HSCCKQYGITGENVRGELLALVKDLPSQLAEIGAAAQQSLGEAIDVYQASVGFVCESPTEQVLPMLRFVQKRGNST  
VYEWRTGTETPSVVERPHLEELPEQVAEDAIDWGDGFGVEAVSEGTDSGISAEAGIDWGIFPESDSKDPGGDGIDW  
GDDAVALQITVLEAGTQAPGVARGPDALTLLLEYTTETRNQFLDELMELEIFLAQRAVELSEEADVLSVSQFQLAP  
AILQGQTKEKMVTMVSVLEDLIGKLTSLQLQHLMILASPRYVDRVTEFLQQKLKQSLLALKKELMVQKQQEAL  
EEQAALPEPKLDLLEKTKELQKLEADISKRYSGRPVNLMTSL

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**FIGURE 4832**

GAAGAGGGTCGGGTATCTGGGCATGCGCAGGGCCGCGAGGACTCTTGGTGGGGTAGCGAGGGGGACGGTCCCACGA  
CTGCTCCGAAGGGCCGGGACTCCCAGTGGGGGCGGGACCCCCGGAGTGCCCGCTGCGGACTCCCAAGCCTGGAG  
CCTGGGGAGAGGGTGGGCACCTCCGTTCCCGCACACCCGTCCATGGTGTGTGCGCCGAGCGTCCAGGAGCCACGG  
CGGTGTCTTCTTGGCGCTCTTTTACACGTGTGGGGGTAGGCTGCTCCTCGGGGCTGAGCCGTGGCCAGGGTTAT  
GGAGAGGCCCCGCTCTCCCCAGATGGCGTCGTGAGCCCTGACTCCCCATGTTCTGCGACTGCTTTGTCTCCGT  
GCCCCGGGCTCAGCCATCCCGGCTGTGATCTTTGCCAAGAACTCGGACCGACCCCGGGACGAGGTGCAGGAGGT  
GGTGTGTTGTCGCCGAGGCACTCACACTCCTGGGAGCCGGCTCCAGTGCACCTACATTGAAGTGGAACAGGTGTC  
GAAGACGCACGCTGIGATTCTGAGCCGTCTTCTTGGCTATGGGGGGCTGAGATGGGCGCCAACGAGCATGGTGT  
CTGCATTGGCAACGAGGCTGTGTGGACGAAGGAGCCAGTTGGGGAGGGGGAAGCCCTGCTGGGCATGGACCTACT  
CAGGCTGGCTTTTGAACGGAGCAGCTCTGCCCAGGAGGCCTTGATGTGATCACAGGGTTACTGGAGCACTATGG  
GCAGGGGGGCAACTGCCTGGAGGATGCTGCGCCATTCTCCTACCATAGCACCTTCTCTGCTGGCTGACCGCACTGA  
GGCGTGGGTGCTGGAGACAGCTGGGAGGCTCTGGGCTGCACAGAGGATCCAGGAGGGGGCCGCAACATCTCCAA  
CCAGCTGAGCATTGGCACGGACATCTCGGCCCAACACCCGGAGCTGCGGACTCATGCCCAGGCCAAGGGCTGGTG  
GGATGGGCAGGGTGCCCTTTGACTTTGCTCAGATCTTCTCCTGACCCAGCAGCCTGTGCGCATGGAGGCTGCCAA  
GGCCCGCTTCAGGCAGGGCGGGAGCTGCTGCGGCAACGGCAAGGGGGCATCACGGCAGAGGTGATGATGGGCAT  
CCTCAGAGACAAGGAGAGTGGTATCTGTATGGAATCGGGAGGCTTTTCGCACCACGGCCAGCATGGTGTCTGTCT  
GCCCCAGGATCCACGCAGCCCTGCGTGCACTTTCTTACCGCCACGCCAGACCCATCCAGGTCTGTGTTCAAACC  
TTTCATCTTCGGGATGGGGGTGGCCAGGCCCCCAGGTGCTGTCCCCCACTTTTGAGACACAAGACCTGTTG  
GACCTGCCCCGATTCCAGACTCAGGTAGATCGTCGGCATAACCTCTACCGTGGACACCAGGCAGCCCTGGGGCT  
GATGGAGAGAGATCAGGATCGGGGGCAGCAGCTCCAGCAGAAACAGCAGGATCTGGAGCAGGAAGGCCTCGAGGC  
CACACAGGGGCTGCTGGCCGGCAGTGGGCCCCACCCCTCTGGGAGCTGGGCAGCCTCTTCCAGGCCTTCGTGAA  
GAGGGAGAGCCAGGCTTATGCGTAAGCTTCATAGCTTCTGCTGGCCTGGGGTGGACCCAGGACCCCTGGGGCCTG  
GGTGCCCTGAGTGGTGGTAAAGTGGAGCAATCCCTTCACGCTCCTTGGCCATGTTCTGAGCGGCCAGCTTGGCCT  
TTGCCTTAATAAATGTGCTTTATTTTC

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**FIGURE 4833**

MASSSPDSPCSCDCFVSVPPASAIPAVIFAKNSDRPRDEVQEVVFPAGTHTPGSRLQCTYIEVEQVSKTHAVIL  
SRPSWLWGAEMGANEHGVCIGNEAVWTKEPVGEALLGMDLLRLALERSSSAQEALHVITGLLEHYGQGGNCLE  
DAAPFSYHSTFLLADRTEAWVLETAGRLWAAQRIQEGARNISNQLSIGTDISAQHPELRTHAQAKGWWDGQGAFD  
FAQIFSLTQQPVRMEAAKARFQAGRELLRQRQGGITAEVMMGILRDKESGICMDSGGFRTTASMVSVLPQDPTQP  
CVHFLTATPDPSRSVFKPFIFGMGVAQAPQVLSPTFGAQDPVRTLPRFQTQVDRRHTLYRGHQAALGLMERDQDR  
GQQLQQKQDLEQEGLEATQGLLAGEWAPPLWELGSLFQAFVKRESQAYA

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**FIGURE 4834**

TCTCCCTCCGCTCCCGAGCACCAGCGGCTCTGAGCTGCCCCAGGGTCCCTCCCCCGCGCCAGCAGCCCATT  
TGGAGGGAGGAAGTAAGGGAAGAGGAGAGGAAGGGGAGCCGGACCGACTACCCAGACAGAGCCGGTGAATGGGTT  
TGTGGTGACCCCGCCCCCACCACCCCTCCCTTCCACCCGACCCCCAACCCCATCCCCAGTTCGAGCCGCC  
GCCCCGAAAGGCCGGGCGTCTCTTAGGAGGAGTCGCGCGCGGCCACCTCCGCCATGGAGCTGATCACCATT  
TCGAGAAGACCGTGTCTCCCGATCGGCTGGAGCTGGAAGCGGCGCAGAAGTTCCTGGAGCGTGCGGCCGTGGAGA  
ACCTGCCCACCTTTCCTTGTGGAAGTGTCCAGAGTGTGGCAAATCCAGGAAACAGTCAGGTTGCCAGAGTTGCAG  
CTGGTCTACAAATCAAGAAGTCTTTGACATCTAAAGATCCAGATATCAAGGCACAAATATCAGCAGAGGTGGCTTG  
CTATTGATGCTAATGCTCGACGAGAAGTCAAGAAGTATGTTTTGCAGACATTGGGTACAGAACTTACCGGCCTA  
GTTCTGCCTCACAGTGTGTGGCTGGTATTGCTTGTGCAGAGATCCAGTAAACCAGTGGCCAGAAGTCAATTCCTC  
AGCTGGTGGCAATGTACAAACCCCAACAGCACAGAGCACATGAAGGAGTCGACATTGGAAGCCATCGGTTATA  
TTTGCCAAGATATAGACCCAGAGCAGCTACAAGATAAATCCAATGAGATTCTGACTGCCATAATCCAGGGGATGA  
GGAAAGAAGAGCCTAGTAATAATGTGAAGCTAGCTGCTACGAATGCACTCCTGAACTCATTGGAGTTCACCAAAG  
CAAAGTTTGATAAAGAGTCTGAAAGGCACCTTTATTATGCAGGTGGTCTGTGAAGCCACACAGTGTCCAGATACGA  
GGGTACGAGTGGCTGCTTTACAGAATCTGGTGAAGATAATGTCTTATATTATCAGTACATGGAGACATATATGG  
GTCCTGCTCTTTTTGCAATCACAAATCGAAGCAATGAAAGTGACATTGATGAGGTGGCTTTACAAGGATAGAAT  
TCTGGTCCAAATGTCTGTGATGAGGAAATGGATTGGCCATTGAAGCTTCAGAGGCAGCAGAACAAGGACGGCCCC  
CTGAGCACACCAGCAAGTTTTATGCGAAGGGAGCACTACAGTATCTGGTTCCAATCCTCACACAGACACTAACTA  
AACAGGACGAAAATGATGATGACGATGACTGGAACCCCTGCAAGCAGCAGGGGTGTGCCTCATGCTTCTGGCCA  
CCTGCTGTGAAGATGACATTGTCCACATGTCTCCCTTCATTAAAGAACACATCAAGAACCCAGATTGGCGGT  
ACCGGGATGCAGCAGTGTGGCTTTGGTTGTATCTTGAAGGACCAGAGCCAGTCAGCTCAAACCACTAGTTA  
TACAGGCTATGCCACCCTAATAGAATTAATGAAAGACCCAGTGTAGTTGTTTCGAGATACAGCTGCATGGACTG  
TAGGCAGAATTTGTGAGCTGCTTCTGAAGCTGCCATCAATGATGTCTACTTGGCTCCCTGCTACAGTGTCTGA  
TTGAGGGTCTCAGTGTGAACCCAGAGTGGCTTCAAATGTGTGCTGGGCTTTCTCCAGTCTGGCTGAAGCTGCTT  
ATGAAGCTGCAGACGTTGTGATGATCAGGAAGAACCAGCTACTTACTGCTTATCTTCTTCATTGAACTCATAG  
TTCAGAAGCTCCTAGAGACTACAGACAGACCTGATGGACACCAGAACAACCTGAGGAGTTCGCATATGAATCTC  
TGATGGAAATTTGTGAAAACAGTGCCAAGGATTGTTATCTGTGTCCAGAAAACGACTTTGGTCATCATGGAAC  
GACTGCAACAGGTTCTTCAGATGGAGTCACATATCCAGAGCACATCCGATAGAATCCAGTTCAATGACCTTCAGT  
CTTTACTCTGTGCAACTCTTCAGAATGTTCTTCGAAAGTGCAACATCAAGATGCTTTGCAGATCTCTGATGTGG  
TTATGGCTCCCTGTTAAGGATGTTCCAAAGCACAGCTGGGTCTGGGGGAGTACAAGAGGATGCCCTGATGGCAG  
TTAGCACACTGGTGGAAGTGTGGGTGGTGAATTCCTCAAGTACATGGAGGCCTTTAAACCTTCTGGGCATTG  
GATTAAAAAATTATGCTGAATACCAGGTTTGTGGCAGCTGTGGGCTTAGTGGGAGACTTGTGCCGTGCCCTGC  
AATCCAACATCATACCTTTCTGTGACGAGGTGATGCAGCTGCTTCTGGAATTTGGGAATGAGAACGTCCACA  
GGTCTGTGAAGCCGCAGATTCTGTGAGTGTGGTGATATTGCCCTTGCTATTGGAGGAGAGTTAAAAAATACT  
TAGAGGTTGTATTGAATACTCTTCAGCAGGCCTCCCAAGCCAGGTGGACAAGTCAGACTATGACATGGTGGATT  
ATCTGAATGAGCTAAGGGAAGCTGCTTGGAAAGCTTACTGGAATCGTCCAGGGATTAAAGGGGATCAGGAGA  
ACGTACACCCGGATGTGATGCTGGTACAACCCAGAGTAGAATTTATTCTGTCTTTCATTGACCACATTGCTGGAG  
ATGAGGATCACACAGATGGAGTAGTAGCTTGTGCTGCTGGACTAATAGGGGACTTATGTACAGCATTGGGAAGG  
ATGTACTGAAATTAGTAGAAGCTAGGCCAATGATCCATGAATTGTTAACTGAAGGGCGGAGATCGAAGACTAACA  
AAGCAAAAACCTTGCTACATGGGCAACAAAAGAACTGAGGAACTGAAGAACCAAGCTTGATCTGTTACCATTG  
GGATGATAACCTGAGGACCCCACTGGAATCTCCCATCTTTGAAAAACCTGGAAGTGAGGAGTGTGCACGGAT  
GCTGAATGTTGGGAATGAGAGGATGAGTGAGTGAGGCTTGAAAACACACCACATTGAAAATCCTGCCACAGCAG  
CAGCCGCAGCCGCCAACAGCAGCGCTGTTAGTGAGCTAAGTAAAGCACTGACTTCGTAGAAAACCATAAATCGGC  
CATCTTGGAAGAGAGAAAAACAATGGAGTTACTTATTTAAAAAATAAAAAAAAAA

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**FIGURE 4835**

MELITILEKTVSPDRLELEAAQKFLERA AVENLPTFLVELSRVLANPGNSQVARVAAGLQIKNSLTSKDPDIKAQ  
YQQRWL AIDANARREVKNYVLQTLGTET YRPSSASQCVAGIACAEIPVNQWPELIPQLVANVTNPNSTEHMKEST  
LEAIGYICQDIDPEQLQDKSNEILTAI IQGMRKEEPSNNVKLAATNALLNSLEFTKANFDKESERHFIMQVVCEA  
TQCPDTRVRVAALQNLVKIMSLYYQYMETYMGPALFAITIEAMKSDIDEVALQGIEFWSNVCDEEMDLAIEASEA  
AEQGRPPEHTSKFYAKGALQYLVPILTQTLLTKQDENDDDDWNPCKAAGVCLMLLATCCEDDIVPHVLPFIKEHI  
KNPDWRYRDAAVMAFGCILEGPEPSQLKPLVIQAMPTLIELMKDPSVVVRDTAAWTVGRICELLPEAAINDVYLA  
PLLQCLIEGLSAEPRVASNVCWAFSSLAEEA YEADVADDQEEPATYCLSSSFELIVQKLL ETDRPDGHQNNLR  
SSAYESLMEIVKNSAKDCYPAVQKTTLVIMERLQQVLQMESHIQSTSDRIQFNDLQSLLCATLQNVLRKVQHQDA  
LQISDVVMASLLRMFQSTAGSGGVQEDALMAVSTLVEVLGGEFLKYMEAFKPFLGIGLKNYAEYQVCLA AVGLVG  
DLCRALQSNIIPFCDEVMQLLENLGNENVHRSVKPQILSVFGDIALAIGGEFKKYLEVVLNTLQQASQAQVDKS  
DYDMVDYLNELRESCLEAYTGIVQGLKGDQENVHPDVMLVQPRVEFILSFIDHIAGDEDHTDGVVACAAGLIGDL  
CTAFGKDV LKLVEARPMIHELLTEGRRSKTNKAKTLATWATKELRKLKNQA



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**FIGURE 4836**

CCCTCCCCCTCCGCCCCCTTCCCCGTAGGCAGCCCGCCCGCCAGTCCGCCCCGCACCGCCTCCTTCCCAGCCCCCTAG  
CGCTCCGGCTGGGTCTCTCCCCGCCCCCCAGGCTCCCCCGGTCTGCTCTCTCTCCGGCGGTTCGCCCCGCGCTCGGTG  
GATGTGGCTGGCAGCTGCCGCCCCCTCCCTCGCTCGCCGCTGCTCTTCTCTCGGCCCTCCGCTCTCTCCCCCTCT  
CCTTCTCGTCTTACAGCCGCTCTCTCGCCGCCGCTCCACAGCCTGGGCCCTCGCCGCGATGCCGGAGAAGAGGCC  
CTTCGAGCGGCTGCCGATGTCTCCCCATCAACTACAGCCTTTGCCTCAAGCCCGACTTGCTGGACTTCAC  
CTTCGAGGGCAAGCTGGAGGCCCGCCGCCAGGTGAGGCAGGCGACTAATCAGATTGTGATGAATTGTGCTGATAT  
TGATATTATTACAGCTTCATATGCACCAGAAGGAGATGAAGAAATACATGTACAGGATTTAACTATCAGAATGA  
AGATGAAAAAGTACACCTTGTCTTTCCCTAGTACTCTGCAAACAGGTACGGGAACCTTAAAGATAGATTTTGTG  
AGAGCTGAATGACAAAATGAAAGGTTTCTATAGAAGTAAATATACTACCCCTTCTGGAGAGGTGCGCTATGCTGC  
TGTAACACAGTTTGGAGCTACTGATGCCCGAAGGGCTTTTCCCTTGTGGGATGAGCCTGCTATCAAAGCAACTTT  
TGATATCTCATTGGTTGTTCCCTAAAGACAGAGTAGCTTTATCAAACATGAATGTAATTGACCGGAAACCATACCC  
TGATGATGAAAATTTAGTGGAAAGTGAAGTTTGGCCGCACACCTGTTATGTCTACATATCTGGTGGCATTGTGTTGT  
GGGTGAATATGACTTTGTAGAAACAAGGTCAAAGATGGTGTGTGTGTCGGTGTTTACACTCCTGTTGGCAAAGC  
AGAGCAAGGAAAATTTGCGTTAGAGGTTGCTGCTAAAACCTTGCCTTTTTATAAGGACTACTTCAATGTTCCCTTA  
TCCTCTACCTAAAATTGATCTCATTGCTATTGCAGACTTTGCAGCTGGTGCCATGGAGAACTGGGGCCTTGTTAC  
TTATAGGGAGACTGCATTGCTTATTGATCCAAAAAATTCCTGTTCTTCAFCGCCAGTGGGTTGCTCTGGTTGT  
GGGACATGAACTCGCCCATCAATGGTTTGGAAATCTTGTTACTATGGAATGGTGGACTCATCTTTGGTTAAATGA  
AGGTTTTGCATCCTGGATTGAATACTGTGTGTAGACCCTGCTTCCCAGAGTATGATATTTGGACTCAGTTTGT  
TTCTGCTGATTACCCCGTGCCAGGAGCTTGACGCCTTAGATAACAGCCATCCTATTGAAGTCAGTGTGGGCCA  
TCCATCTGAGGTTGATGAGATATTTGATGCTATATCATATAGCAAAGGTGCATCTGTCTATCCGAATGCTGCATGA  
CTACATTGGGGATAAGGACTTTAAGAAAGGAATGAACATGTATTTAACCAGTTCCAACAAAAGAATGCTGCCAC  
AGGTAATCTCTTAATAGCTTGAGATAGAAATGGAGAGAAAGTATTGTCACTCTATCCAGGCTGGGACATTTTATT  
TTGTTCTGAATACTTAAGGTCAGGATCCATGTAATAAATAAATTAGCCTTATTG

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**FIGURE 4837**

MWLAAAAPSLARRLLFLGPPPPPLLLLVSRRSSRRRLHSLGLAAMPEKRPFERLPADVSPINCSLCLKPDLLDFT  
FEGKLEAAAQVRQATNQIVMNCADIDIITASYAPEGDEEIHATGFNYQNEDEKVTLSPSTLQTGTGLKIDFVG  
ELNDKMKGFYRSKYTTSPGEVRYAAVTQFEATDARRAFPCWDERAIKATFDISLVVPKDRVALSNMNVIDRKPYP  
DDENLVEVKFARTPVTSTYLVAFVVGEYDFVETRSDGVCVCVYTPVGKAEQKFALEVAAKTLPFYKDYFNVPY  
PLPKIDLIAIADFAAGAMENWDLVTYRETALLIDPKNSCSSSRQWVALVVGHELHQWFGNLVTMEWWTHLRLNE  
GFASWIEYLCVDHCFPEYDIWTQFVSADYTRAQELDALDNSHPIEVSVGHPSEVDEIFDAISYSGASVIRMLHD  
YIGDKDFKKGMNMYLTKFQQKNAAGNL

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**FIGURE 4838**

CGCCCCGGGCAGGTCTCCCGGAAGTGCCGGTCCAGAGCTGTGGGGTGCCCTCCGCGCGGTCTCTGGCGGATCGGGG  
AATCGGATCAAGGCGAGAGGATCCGGCAGGGAAGGAGCTTCGGGGCCGGGGTTGGGCCGCACATTTACGTGCGC  
GAAGCGGAGTGGAACGGGAGCTGGTGACGATGCGGGGCCGAGCCCCCTGGCGCTGCAACTGGAACAGTTGTTGA  
ACCCGCGACCAAGCGAGGCGGACCCTGAAGCGGACCCCGAGGAAGCCACTGCTGCCAGGGTGATTGACAGGTTTG  
ATGAAGGGGAAGATGGGGAAGGTGATTTCTAGTAGTGGGTAGCATTAGAAAAGTGGCATCAGCCTCCCTCTTG  
ACACGGACAAAAGGTATTGCGGCAAAACCACCTCTAGAAAAGCATGGAATGAAGACCATTGGGAGCAGACTCTGC  
CAGGATCGTCTGATGAGGAAATATCTGATGAGGAAGGGTCTGGAGATGAAGATTGAGAGGGACTGGGTCTGGAGG  
AATATGATGAGGACGACCTGGGTGCTGCTGAGGAACAGGAGTGTGGTGATCACAGGGAGAGCAAGAAGAGCAGAA  
GCCACTCTGCAAAAACACCGGGCTTCAGTGTCCAGAGTATCAGTGACTTTGAGAAATTTACCAAGGGAATGGATG  
ACCTTGGGAGCAGTGAGGAGGAGGAAGACGAAGAGAGTGGCATGGAAGAAGGGGATGACGCGGAAGACTCCCAAG  
GCGAGAGTGAGGAAGACAGGGCTGGAGATAGAAAAGTGGAGTATGGTGTGGTGATGACCTTCTCTAGTGTCA  
AAGTTTCTGAGGAAGTGGAGAAAGGAAGAGCCGTGAAGAACCAGATAGCACTGTGGGACCAGCTCTTGAAGGAA  
GGATCAAACTACAAAAGCTCTGTTGACCACCAACCAGCTTCTCAACCAGATGTTTTCCATTGTTCAAGGACA  
AAGGTGGCCAGAAATTTTCCAGTGCCCTGAAAAATAGTCACAAGGCACTTAAAGCATTGTTGAGGTGATTGGTAG  
GTCTTCAGGAAGAGTTGCTTTTCCAGTACCCAGACACTAGATATCTAGTAGATGGGACAAAGCCCAATGCGGGAA  
GTGAGGAGATTTCTAGTGAAGATGATGAGCTGGTAGAAGAGAAGAAGCAGCAACGAAGAAGGGTCCCTGCAAAGA  
GGAAGCTGGAGATGGAGGACTATCCAGCTTCATGGCAAGCGCTTTGCCGACTTTACAGTCTACAGGAACCGCA  
CACTTCAGAAATGGCACGATAAGACCAAACCTGGCTTCTGAAAACTGGGGAAGGGTTTTGGTGCCCTTTGAACGCT  
CAATCTTGACTCAGATCGACCATATTCTGATGGACAAAGAGAGATTACTTCAAGGACACAGACCAAGCGCTCTG  
TCTATCGAGTTCTTGGCAAACCTGAGCCAGCAGCTCAGCCTGTCCCAGAGAGTTTGCCAGGGGAACCGGAGATCC  
TTCTCAAGCCCCTGCTAATGCTCATCTGAAGGACTTGATGAAGAAATCTTTGATGATGATGACTTTTACCACC  
AGCTCCTTCGAGAACTCATAGAACGGAAGACCAGCTCCTTGGATCCCAACGATCAGGTGGCCATGGGAAGGCAGT  
GGCTTGCAATCCAGAAGTTACGAAGCAAAATCCACAAAAAAGTAGATAGGAAAGCCAGCAAAGGCAGGAAACTTC  
GGTTTCATGTCTTAGCAAGCTACTGAGTTTCATGGCACCTATTGACCATACTACAATGAATGATGATGCCAGGA  
CAGAACTGTACCGCTCTCTTTTTGGCCAGCTCCACCCTCCCGACGAAGGCCACGGGGATTGACATCGCCACCTC  
CGACACCCAGTGGGCGCCTTGGCTGGTGCGGTGCTGGTCCAGATGGAGGAAACCAGTGACTTTATGGGGCTGAG  
CTAGTAGGGAAGCCCCTGGAAAGATGCTGCGTTCCGAACCTGTGCCTAATACACGCAAGGGCGCTGTCCCGCCA  
ACCCCGCCTTTAAACGCCACAAATAAAGAGCATTGTTACCGCCAAAAA

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**FIGURE 4839**

MAGPQPLALQLEQLLNPRPSEADPEADPEEATAARVIDRFDEGEDGEGDFLVVGSIRKCLASASLLDIDKRYCGKT  
TSRKAWNEDHWEQTLPGSSDEEISDEEGSGDEDSEGLGLEEYDEDDLGAEEQECGDHRESKKSRSHTSAKTPGFS  
VQSISDFEKFTKGMDLGSSEEEDEESGMEEGDDAEDSQGESEEDRAGDRNSEDDGVVMTFSSVKVSEEEVEKGR  
AVKNQIALWDQLLEGRIKLQKALLTTNQLPQPDVFPFLFKDKGGPEFSSALKNSHKALKALLRSLVGLQEELLFQY  
PDTRYLVDTGKPNAGSEEEISSEDELVEEKKQQRVVPAKRKLEMEDYPSFMAKRFAFTVYRNRTLQKWHDKTK  
LASGKLGKGFAGAFERSILTQIDHILMDKERLLRRTQTKRSVYRVLGKPEPAAQVPESLPGEPEILPQAPANAH  
KDLDEEIFDDDDFYHQLLRELIERTSSLDPNQVAMGRQWLAIQKLRSKIHKKVDRKASKGRKLRFHVLSKLLS  
FMAPIDHTTMNDARTELYRSLFGQLHPPDEGHGD

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## FIGURE 4840

CTTCCCGCCGCTGACCTGGCCCGCCGCTTTCCAGTCTGGCCGGGCGGGCCTGAAGCACGGCGCTCGGGCGT  
GGGACCGTGTTACACCCCTTTCCAGAAATTCTTGGCTGGTAACCGCGAAACCGACTGGAGCAGGAGCTGGGAGAA  
CTGGAGAAAACCTGCTCTAATCTCACTTGACTCCAGCTAGGAGCTGATGCTGCATCGTAATAACATTTGCAGAGCG  
CTTTCACAGGCGCTGGAGTGACTTGTCTGAGATTCTCCAGAACTGAGCCCTTTGTTGGAACCATACCCAGCCC  
ATGGTCCCATGACTAGGTGGATAGTACTCCTTGACTCTCTGCAACCCAGAACCCCTGGCTGACCACITTTGAAGGA  
GGATGCTCCAGCAGGTCAATGGCCACAATCCGGGGTCTGATGGCCAAGCCAGGGAGTACCTCAGAGAAGACCTGC  
AGGAGTTCTGGGTGGGGAGGTCTCTGTGTACAACTGGATGACCTACCAAGGTGAATCTGTGACACTAGAGA  
CAGTCTTGAGGTGCCTGCAGGCCCGGTACATGGCAGACACATTCTACACCAATGCTGGCTGCACCTGGTAGCCT  
TGAACCCCTTCAAGCCTGTTCTCAGCTCTACTCGCCCGAGCTAATGAGAGAGTACCATGCTGCGCCTCAGCCCC  
AGAAACTGAAGCCCATGTGTTCACTGTGGGTGAACAGACCTACAGGAATGTCAAGAGCCTGATTGAACAGTCA  
ACCAGTCTATTGTTGTGCTGAGGAGAGTGGTGTGGAAGACATGGACGTCTCGCTGCCTAATGAAGTTCTATG  
CTGTGGTGGCCACCTCACCTGCATCTTGGGAGAGCCACAAGATTGCAGAGAGGATAGAACAGAGGATCCTGAACT  
CCAACCCCTGTATGGAAGCTTTTGGGAATGCGTGTACACTGAGGAATAACAACAGCAGTCGCTTTGGGAAGTTCA  
TCCAGCTCCAGCTGAACAGGGCTCAGCAAATGACTGGAGCCGAGTCCAGACCTACCTCCTAGAGAAAACCTCGAG  
TGGCCTGCCAGGCTTCCAGTGAGAGGAACTTCCACATCTTCTATCAGATTGCAAAGGAGCCAGTGAGGACGAGA  
GGCTCCAGTGGCACCTTCTGAGGGAGCTGCCTTCTCTGGCTGCCCAACCCAGAGAGGAGCTTAGAAGAGGATT  
GTTTTGAGGTGACCAGAGAGGCCATGCTCCATTTGGGCATTGACACCCCTACCCAGAACAACATCTTTAAGGTCC  
TAGCTGGACTGCTGCACCTTGGCAATATCCAGTTTGTCTGCTCCGAGGATGAAGCCCAGCCCTGCCAGCCGATGG  
ATGATGCCAAGTACTCTGTGACGACGGCAGCCTCGTGTCTGGGGCTCCCAGAGGACGTGTGCTGGAGATGGTGC  
AGATTAGAACCATCAGGGCAGGCAGACAGCAGCAGGTGTTCCGGAAGCCCTGCGCCGAGCCGAGTGTGACACCC  
GTAGAGACTGCCTGGCCAACTGATCTATGCGCGGTGTTTGGTGGCTGGTATCAGTGATCAACAGCAGCATCT  
GTGCAGACACCGACTCGTGGACCACTTTCATAGGCTGTGGATGTGTATGGATTTGAATCATTTCTGACAAACA  
GTCTGGAACAGTTGTGCATCAACTACGCCAATGAGAAGCTGCAGCTGGAGGCCTGTGGCCTCGTGGAGACCATCC  
ATATCAGTGTCTGTGGCTTCCCATCCGGGTCTCTACCGAACTTTGTAGAACGATACAAGTTACTAAGAAGGC  
TTCATCCTTGACATCCTCTGGCCCCGACAGCCCATATCTGCCAAAGGGCTCCCTGAATGGTGTCCACACAGCG  
AGGAAGCCACGCTTGAACCTCTCATCCAGGACATTCTCCACACTCTGCCGGTCTTAACCTCAGGCAGCAGCCATAA  
CTGGTGACTCGGCTGAGGCCATGCCAGCCCCATGCACTGTGGCAGGACCAAGGTGTTCTGACTGACTCTATGC  
TGGAGCTTCTGGAATGTGGCGTGGCCGGGTGCTGGAGCAGTGTGCCCGCTGCATCCAGGTGGCTGGAGGCGAC  
ACCGGCACCGAGAGCAGGAGCGGCAGTGGCGGGCGTCTATGCTCATCCAGGCAGCCATTCTGTTCTGGTTAACTC  
GGAAACACATCCAGAGGCTGCATGCAGCTGCCACAGTCAATCAAGCGTGCATGGCAGAAGTGGAGAATCAGAATGG  
CCTGCCTTGCTGCTAAAGAGCTGGATGGTGTGGAAGAAAAACACTTCTCTCAAGCTCCCTGTTCCCTGAGCACCT  
CGCCGCTGCAGACCAGGCTCCTGGAGGCAATAATCCGCTCTGGCCCTGGGACTGGTCTGGCCAATACGGCTA  
TGGGTGTAGGCAGCTTTCAGAGGAAATTAGTGGTCTGGGCTTGCCTCCAGCTCCCCAGGGGCAGCCCCAGTAGCT  
ACACTGTCCAGACAGCACAAGACCAGGCTGGTGTACGTCCATCCGAGCGCTGCCTCAGGGATCGATAAAGTTTC  
ACTGCAGAAAGTCTCCACTGCGGTATGCTGACATCTGCCCTGAACCTTCACCTACAGCATTACAGGCTTTAATC  
AGATTCTGTGGAAGACACAGGCTGATCCACGTGACCTCTTCTGCCTTCACTGGGCTGGGGTATCCTTGGTGC  
CTTTGTTTCCACAAGGCCTTTTCTGCCCCCTGCCTTGCCAAAGACATTTAATCAGCACACAGCTGCCAGACTAT  
TCCACAGTGTCCAAATGCACATGAACAACAGTGACGGCTCCAGCCTTCGACCCAGAGCCCCGTGCCAGTGCG  
TCAGTGGGCTGGGGTTCCAGGCTACATCAAGCACTGATGGTGTGAGGGCTGGTAGTTACCAATCAGGGTTAAG  
AAACATCAGGGCCACATTTCACTACCTTCACAGATCAAACTCAGCAGCAGTCATGACTGTCTGTCACTACACTGG  
GGATCCCAATTCACATAAGCACTTTTGAAGAAAACAGCCAAAGTTGGCCTAAAATTGGCGCTGGAATTTGGGC  
TGGGAAAAATCTGTGGTTATTTCTTTAAAAAGGAACAAAACCTTAGTATTTAATTAGTTGATTTATTTAATGT  
AATTTCAAACAATTAAATTATGAATAATGCAATGT

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**FIGURE 4841**

ATGGACATGGCGGATGAGCCACTCAATGGAAGCCACACATGGCTATCCATTCCATTGACCTCAATGGCTCTGTG  
GTGTCAACCAACACCTCAAACCAGACAGAGCCGTACTATGACCTGACAAGCAATGCAGTCCTCACATTCATCTAT  
TTTGTGGTCTGCATCATTGGGTTGTGTGGCAACACACTTGTCATTTATGTCATCCTCCGCTATGCCAAGATGAAG  
ACCATCACCAACATTTACATCCTCAACCTGGCCATCGCAGATGAGCTCTTCATGCTGGGTCTGCCTTTCTTGGCT  
ATGCAGGTGGCTCTGGTCCACTGGCCCTTTGGCAAGGCCATTGCGGGTGGTCATGACTGTGGATGGCATCAAT  
CAGTTCACCAGCATCTTCTGCCTGACAGTCATGAGCATCGACCGATACCTGGCTGTGGTCCACCCCATCAAGTCG  
GCCAAGTGGAGGAGACCCCGGACGGCCAAGATGATCACCATGGCTGTGTGGGGAGTCTCTCTGCTGGTCATCTTG  
CCCATCATGATATATGCTGGGCTCCGGAGCAACCAGTGGGGGAGAAGCAGCTGCACCATCAACTGGCCAGGTGAA  
TCTGGGGCTTGGTACACAGGGTTCATCATCTACACITTCATTCTGGGGTTCCTGGTACCCCTCACCATCATCTGT  
CTTTGCTACCTGTTTATTATCATCAAGGTGAAGTCTCTGGAATCCGAGTGGGCTCCTCTAAGAGGAAGAAGTCT  
GAGAAGAAGGTACCCGAATGGTGTCCATCGTGGTGGCTGTCTTCATCTTCTGCTGGCTTCCCTTCTACATATTC  
AACGTTTCTTCCGCTCTCCATGGCCATCAGCCCCACCCAGCCCTTAAAGGCATGTTTGACTTTGTGGTGGTCTC  
ACCTATGCTAACAGCTGTGCCAACCTATCCTATATGCCTTCTTGTCTGACAACTTCAAGAAGAGCTTCCAGAAT  
GTCCTCTGCTTGGTCAAGGTGAGCGGCACAGATGATGGGGAGCGGAGTGACAGTAAGCAGGACAAATCCCGGCTG  
AATGAGACCACGGAGACCCAGAGACCCTCCTCAATGGAGACCTCCAAACCAGTATCTGA

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**FIGURE 4842**

MDMADEPLNGSHTWLSIPFDLNGSVVSTNTSNQTEPYDLTSTNAVLTFIYFVVCIIIGLCGNTLVIYVILRYAKMK  
TITNIYILNLAIADLFLGLPFLAMQVALVHWPFKAICRVVMTVDGINQFTSIFCLTVMSIDRYLAVVHPIKS  
AKWRRPRTAKMITMAVWGVSLLVILPIMYAGLSNQWGRSSCTINWPGESGAWYTGFIITYFILGLVPLTIIC  
LCYLFIIIKVKSSGIRVGSSKRKKSEKKVTRMVSIVVAVFIFCWLPFYIFNVSSVSMAISPTPALKGMFDFVVVL  
TYANSCANPILYAFLSDNFKKSFQNVLCVLKVSCTDDGERSDSKQDKSRLNETTETQRTLLNGDLQTSI

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**FIGURE 4843**

CAGCGAGCCGCGAGCGCAATCCCGGCGCTCGCCCAAGGACCCTGGAAGCTACCGTTACCCGCGCGGCAGCGTGGGC  
GCCATGAGCAGCTCGGGACTGAATTCGGAGAAGGTAGCTGCTCTGATACAGAACTGAATTCGACCCCCAGTTC  
GTACTTGCCAGAAATGTCGGGACCACCCACGACCTGCTGGACATCTGTCTGAAGCGGGCCACGGTGCAGCGCGCG  
CAGCATGTGTTCCAGCAGCCGTGCCCCAGGAGGGCAAGCCAATCACCACCAGAAGAGCTCAGGGCGATGCTGG  
ATCTTTTCTGTCTGAATGTTATGAGGCTTCCATTGATGAAAAAGTTAAATATTGAAGAAATTTAGTTTAGCCAA  
TCTTACCTGTTTTTTTGGGACAAGGTTGAACGCTGTTATTTCTTCTTGAGTGCTTTTGTGGACACAGCCCAGAGA  
AAGGAGCCTGAGGATGGGAGGCTGGTGCAGTTTTTGTCTATGAACCCCTGCAAATGATGGTGGCCAATGGGATATG  
CTTGTTAATATTGTTGAAAAATATGGTGTATCCCTAAGAAATGCTTCCCTGAATCTTATACAACAGAGGCCAACC  
AGAAGGATGAATGATAATTCTGAATCACAAGATGAGAGAATTCTGTATACGACTGCGGAACCTGGTACACAGTGA  
GCAACCAAGGAGAAATCTCGGCCACACAGGACGTCATGATGGAGGAGATATTCGAGTGGTGTGCATCTGTTTG  
GGTAATCCACCAGAGACATTCACCTGGGAATATCGAGACAAAGATAAAAATTATCAGAAAAATGGCCCCATAACA  
CCCTTGAGTTTTTACAGGGAACATGTCAAGCCACTCTTCAATATGGAAGATAAGATTTGTTTAGTGAATGACCC  
AGGCCCCAGCACAAGTACAACAACTTTACACAGTGAATACTTAAGCAATATGGTTGGTGGGAGAAAACTCTA  
TACAACAACCAGCCCATTGACTTCCCTGAAAAAGATGGTTGCTGCCTCCATCAAAGATGGAGAGGCTGTGTGGTTT  
GGCTGTGATGTTGGAAAACACTTCAATAGCAAGCTGGGCCTCAGTGACATGAATCTCTATGACCATGAGTTAGT  
TTTGGTGTCTCCTTGAAGAACATGAATAAAGCGGAGAGGCTGACTTTTGGTGAGTCACTTATGACCCACGCCATG  
ACCTTCACTGCTGTCTCAGAGAAGGATGATCAGGATGGTGCTTTCACAAAATGGAGAGTGGAGAATTCATGGGGT  
GAAGACCATGGCCACAAAGGTTACCTGTGCATGACAGATGAGTGGTTCTCTGAGTATGCTACGAAGTGGTGGTG  
GACAGGAAGCATGTCCCTGAAGAGGTGCTAGCTGTGTTAGAGCAGGAACCCATTATCCTGCCAGCATGGGACCCC  
ATGGGAGCTTTGGCTGAGTGATACGCCCCCAGCTCTTTCCTCCTTCCATGGAACCTGACGTAGCTGCAAAGGA  
CAGATCCAGGGACTGAAGCCAAAGTTATGCAAGGGACTGTGTGTTGCCACAGGACACAGTCAGATTTCCAGTCTC  
CACCAGGAACCTCTTCAGAAAGTGTGCTTTATGCTGAAACAGAATACTGTAAAGGAAAAAAGAGGGGGGAAG  
ATCAGGTCATACTATCTACTCTCCTCATCTCTAACAGCTCAGGATCTCTTAGCATTTTAATTAGATGTAATTGTT  
TGTCTTTAACTGTCAAAAAGTTTGGTTCTGTGTCTGTGTTTAAATAAGACGAGAGGACGAGCGATTGAGGTGTAT  
GGAGAGAAAACAGACCTAATGCTCCTTGTTCCTAGAGTAGAGTGGAGGGAGGGTGGCCTAAGAGTTGAGCTCTCG  
GAACTGCATGCTGCTGGACAGTATCACTGTCTTTCTAGATGGCAGTCACTGAATTC



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**FIGURE 4844**

MSSSGLNSEKVAALIQKLNSDPQFVLAQNVGTTDILLDICLKRA TVQRAQHVFQHAVPQEGKPITNQKSSGRCWI  
FSCLNVMRLPFPKKLNIEEFESQSYLFFWDKVERCYFFLSAFVDTAQRKEPEDGRLVQFLLMNPANDGGQWDM L  
VNIVEKYGVIPKKCFPESYTTEATRMMNDILNHKMRFCIRLRNLVHSGATKGEISATQDVMMEEIFRVVCICLG  
NPPETFTWEYRDKDKNYQKIGPITPLEFYREHVKPLFNMEDKICLVNDPRPQHKYNKLYTVEYLSNMVGGRTLY  
NNQPIDFLKKMVAASIKDGEAVWFGCDVGKHFNSKLGSDMNLYDHEL VFGVSLKNMNKAERLTFGESLMTHAMT  
FTAVSEKDDQDGAFTKWRVENSWGEDHGKGYLCMTDEWFSEYVYEVVVDRKHVPEEVLAVLEQEP IILPAWDPM  
GALAE

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**FIGURE 4845**

GTAGTCTGAGCGCTACCCGGTTGCTGCTGCCCAAGGACCGCGGAGTCGGACGCAGGCAGACCATGTGGAACCTGG  
TGAGCTGGGTGGCCTTAACAGCAGGGCTGGTGGCTGGAACGCGGTGCCAGATGGTCAGTTCTGCCCTGTGGCCT  
GCTGCCTGGACCCCGGAGGAGCCAGCTACAGCTGCTGCCGTCCCCTTCTGGACAAATGGCCACAACACTGAGCA  
GGCATCTGGGTGGCCCTGCCAGGTTGATGCCACTGCTCTGCCGGCCACTCCTGCATCTTTACCGTCTCAGGGA  
CTTCAGTTGCTGCCCTTCCCAGAGGCCGTGGCATGCGGGGATGGCCATCACTGCTGCCACAGGGGCTTCCACT  
GCAGTCAGACGGGCGATCCTGCTTCCAAAGATCAGGTAACAACCTCCGTGGGTGCCATCCAGTGCCCTGATAGTC  
AGTTCGAATGCCCGGACTTCTCCACGTGCTGTGTTATGGTCGATGGCTCCTGGGGGTGCTGCCCCATGCCCCAGG  
CTTCCTGCTGTGAAGACAGGGTGCAGTGTGCTCCGCACGGTGCCTTCTGCGACCTGGTTACACCCGCTGCATCA  
CACCCACGGGCACCCACCCCTGGCAAAGAAGCTCCCTGCCCAGAGGACTAACAGGGCAGTGGCCTTGTCCAGCT  
CGGTCATGTGTCCGGACGCACGGTCCCGGTGCCCTGATGGTTCTACCTGCTGTGAGCTGCCCAGTGGGAAGTATG  
GCTGTGCCCAATGCCAACGCCACCTGCTGCTCCGATCACCTGCACTGCTGCCCCAAGACACTGTGTGTGACC  
TGATCCAGAGTAAGTGCTCTCCAAGGAGAACGCTACCACGGACCTCCTCACTAAGCTGCCTGCGCACACAGTGG  
GGGATGTGAAATGTGACATGGAGGTGAGCTGCCAGATGGCTATACCTGCTGCCGTCTACAGTCGGGGGCTGGG  
GCTGTGCCCTTTTACCCAGGCTGTGTGCTGTGAGGACCACATACTGCTGTCCCGCGGGGTTTACGTGTGACA  
CGCAGAAGGGTACCTGTGAACAGGGGCCCCACCAGGTGCCCTGGATGGAGAAGGCCCCAGCTCACCTCAGCCTGC  
CAGACCCACAAGCCTTGAAGAGAGATGTCCCTGTGATAATGTCAGCAGCTGTCCCTCCTCCGATACCTGCTGCC  
AACTCACGTCTGGGGAGTGGGGCTGCTGTCCAATCCCAGAGGCTGTCTGCTGCTCGGACCACCAGCACTGCTGCC  
CCCAGGGCTACACGTGTGTAGCTGAGGGGCAGTGTGAGCGAGGAAGCGAGATCGTGGCTGGACTGGAGAAGATGC  
CTGCCCGCGGGCTTCCTTATCCACCCAGAGACATCGGCTGTGACCAGCACACCAGCTGCCCGGTGGGGCAGA  
CCTGTGCCCGAGCCTGGGTGGGAGCTGGGCCTGCTGCCAGTTGCCCCATGCTGTGTGCTGCGAGGATCGCCAGC  
ACTGCTGCCCGGTGGCTACACCTGCAACGTGAAGGCTCGATCCTGCGAGAAGGAAGTGGTCTCTGCCCAGCCTG  
CCACCTTCTGCCCCGTAGCCCTCACGTGGGTGTGAAGGACGTGGAGTGTGGGAAGGACACTTCTGCCATGATA  
ACCAGACCTGCTGCCGAGACAACCGACAGGGCTGGGCCTGCTGTCCCTACCGCCAGGGCGTCTGTGTGCTGATC  
GGCGCCACTGCTGTCTGCTGGCTTCCGCTGCGCAGCCAGGGGTACCAAGTGTGCGCAGGGAGGCCCCGCGCT  
GGGACGCCCTTTGAGGGACCCAGCCTTGAGACAGCTGCTGTGAGGGACAGTACTGAAGACTCTGCAGCCCTCGG  
GACCCCACTCGGAGGGTGCCCTCTGCTCAGGCCTCCCTAGCACCTCCCCCTAACCAAATTCTCCCTGGACCCAT  
TCTGAGCTCCCCATCACCATGGGAGGTGGGGCCTCAATCTAAGGCCTTCCCTGTGAGAAGGGGGTGTGGCAAAA  
GCCACATTACAAGCTGCCATCCCCTCCCCGTTTCAGTGGACCCTGTGGCCAGGTGCTTTTCCCTATCCACAGGGG  
TGTTTGTGTGTGTGCGCGTGTGCGTTTCAATAAAGTTTGTACACTTTCAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAA

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**FIGURE 4846**

MWTLVSWVALTAGLVAGTRCPDGQFCPVACCLDPGGASYSCCRPLLDKWPTTLRHLGGPCQVDAHCSAGHSCIF  
TVSGTSSCCPFPEAVACGDGHHCCPRGFHCSADGRSCFQSRGNNVSGAIQCPDSQFECPDFSTCCVMVDGSWGCC  
PMPQASCCEDRVHCCPHGAFCDLVHTRCITPTGTHPLAKKLPAQRTNRAVALSSSV MCPDARSRCPDGSTCCELP  
SGKYGCCPMPNATCCSDHLHCCPQDTVCDLIQSKCLSKENATTDLLTKLPAHTVGDVKCDMEVSCPDGYTCCRLQ  
SGAWGCCPFTQAVCCEDHIHCCPAGFTCDTQKGTCEQGPHQVPWMEKAPAHLSLPDPQALKRDVPCDNVSSCPSS  
DTCCQLTSGEWGCCPIPEAVCCSDHQHCCPQGYTCVAEGQCQRGSEIVAGLEKMPARRASLSHPRDIGCDQHTSC  
PVGQTCCPSLGGSWACCQLPHAVCCEDRQHCCPAGYTCNVKARSCEKEVVSAQPATFLARSPHVGVKDVECGEGH  
FCHDNQTCCRDNRQGWACCPYRQGVCCADRRHCCPAGFRCAARGTKCLRREAPRWDAPLRDPALRQLL

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**FIGURE 4847**

GGCTAGGTGCGCTGCGAGCGCGGGAGCCACGAGGGCGGACGGACGTAATGGGCCCGCCTGGCCCTGGGCGCCGC  
GCCGCACGAGCACCAGCCTAGAGCCAGGACTGAAGCTTCAAGATGGCTGACCAGGACCCTGCGGGCATCAGCCCC  
CTCCAGCAAATGGTGGCCTCAGGCACCGGGGCTGTGGTTACCTCTCTTCATGACACCCCTGGACGTGGTGAAG  
GTTGCGCTGCAGTCTCAGCGGCCCTCCATGGCCAGCGAGCTGATGCCTTCCTCCAGACTGTGGAGCCTCTCCTAT  
ACCAAATGGAAGTGCCTCCTGTATTGCAATGGTGTCTGGAGCCTCTGTACCTGTGCCCAAATGGTGGCCGCTGT  
GCCACCTGGTTTCAAGACCCTACCCGCTTCACTGGCACCATGGATGCCTTCGTGAAGATCGTGAGGCACGAGGGC  
ACCAGGACCCTCTGGAGCGGCCTCCCGCCACCCTGGTGATGACTGTGCCAGCTACCGCCATCTACTTCACTGCC  
TATGACCAACTGAAGGCCTTCCTGTGTGGTCGAGCCCTGACCTCTGACCTCTACGCACCCATGGTGGCTGGCGCG  
CTGGCCCGCCTGGGCACCGTGACTGTGATCAGCCCCCTGGAGCTTATGCGGACAAAGCTGCAGGCTCAGCATGTG  
TCGTACCGGGAGCTGGGTGCCTGTGTTTGAAGTGCAGTGGCTCAGGGTGGCTGGCGCTCACTGTGGCTGGGCTGG  
GGCCCCACTGCCCTTCGAGATGTGCCCTTCTCAGCCCTGTACTGGTTCAACTATGAGCTGGTGAAGAGCTGGCTC  
AATGGGTTTCAAGGCCAAGGACCAGACTTCTGTGGGCATGAGCTTTGTGGCTGGTGGCATCTCAGGGACGGTGGCT  
GCAGTGCTGACTCTACCCCTTTGACGTGGTAAAGACCCAACGCCAGGTGCTCTGGGAGCGATGGAGGCTGTGAGA  
GTGAACCCCTGCATGTGGACTCCACCTGGCTGCTGCTGCGGAGGATCCGGGCCGAGTCGGGCACCAAGGGACTC  
TTTGCAGGCTTCCTTCCTCGGATCATCAAGGCTGCCCCCTCCTGTGCCATCATGATCAGCACCTATGAGTTCGGC  
AAAAGCTTCTTCCAGAGGCTGAACCAGGACCGGCTTCTGGGCGGCTGAAAGGGGCAAGGAGGCAAGGACCCCGTC  
TCTCCACGGATGGGAGAGGGCAGGAGGAGACCCAGCCAAGTGCCTTTTCTCAGCACTGAGGGAGGGGGCTTG  
TTTCCCTTCCCTCCCGGCGACAAGCTCCAGGGCAGGGCTGTCCCTCTGGGCGGCCAGCACTTCTCAGACACAA  
CTTCTTCTGCTGCTCCAGTCGTGGGATCATCACTTACCCACCCCCAAGTTCAAGACCAAATCTTCCAGCTGC  
CCCCCTCGTGTTCCTGTGTTTGTGTAGCTGGGCATGTCTCCAGGAACCAAGAAGCCCTCAGCCTGGTGTAGT  
CTCCCTGACCCTTGTTAATTCCTTAAGTCTAAAGATGATGAACCTTCAAAAAAAAAA

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**FIGURE 4848**

MADQDPAGISPLQQMVASGTGAVVTSLEMTPLDVVKVRLQSQRPMSASELMPSSRLWSLSYTKWKCLLYCNGVLE  
PLYLCPNGARCATWFQDPTRFTGTMDAFVKIVRHEGTRILWSGLPATLVMTVPATAIYFTAYDQLKAFLCGRALT  
SDLYAPMVAGALARLGTVTVISPLELMRTKLQAQHVSYRELGACVRTAVAQGGWRSWLWGWPTALRDVPFSALY  
WFNYELVKSWLNGFRPKDQTSVGMSFVAGGISGTVA AVLTLPLFDVVKTRQVQVALGAMEAVRVNPLHVDSTWLLLR  
RIRAESGTKGLFAGFLPRIIKAAPSCAIMISTYEFGKSFFQRLNQDRLLGG

GGAGCCGTCACCCCGGGCGGGGACCCAGCGCAGGCAACTCCGCGCGCGCGGCCGCCGAGGGAGGGAGGAGCGAGCGCGGAGCGCGGGCGGAAGCCAGACAGCTGGGCGCGAGCAGCCGCGGGCGCCCCGAGGGCGGAGCGAGATTGTAAACCATGCTGTGTGGATACAAGCTCAGCAGCTCCAAGGAGAAGCCCTTCATCAGATGCAAGCGTTATATGCCAGCATTTCATCCATTGAGGTGCGGCATTATTTATCCAGTGGATTGAAAGCCAAGCATGGGACTCAGTAGATCTTGATAATCCACAGGAGAACATTAAGGCCACCCAGCTCCTGGAGGGCCTGGTGCAGGAGCTGCAGAAGAAGGCAGAGCACCAGGTGGGGAAGATGGGTTTTTACTGAAGATCAAGCTGGGGCACTATGCCACACAGCTCCAGAACACGTATGACCGCTGCCCATGAGCTGGTCCGCTGCATCCGCCATATATTGTACAATGAACAGAGGTTGGTCCGAGAAGCCAACAATGGTAGCTCTCCAGCTGGAAGCCTTGCTGATGCCATGTCCCAGAAACACCTCCAGATCAACCAGACGTTTGAGGAGCTGCGACTGGTCACGCAGGACACAGAGAATGAGTTAAAAAAGCTGCAGCAGACTCAGGAGTACTTCATCATCCAGTACAGGAGAGCCTGAGGATCCAAGCTCAGTTTGCCCGCTGGCCAGCTGAGCCCCAGGAGCGTCTGAGCCGGGAGACGGCCCTCCAGCAGAAGCAGGTGTCTCTGGAGGCCTGGTTGCAGCGTGAGGCACAGACACTGCAGCAGTACCGGTGGAGCTGGCCGAGAAGCACCAGAAGACCCTGCAGTCTGCGGAAGCAGCAGACCATCATCCTGGATGACGAGCTGATCCAGTGGAAGCGGCGGCAGCAGCTGGCCGGGAACGGCGGGCCCCCGAGGGCAGCCTGGACGTGCTACAGTCTGGTGTGAGAAGTTGGCCGAGATCATCTGGCAGAACCAGGCAGCAGATCCGCAGGGCTGAGCACCTCTGCCAGCAGCTGCCCCATCCCCGGCCAGTGGAGGAGATGCTGGCCGAGGTCAACGCCACCATCACGGACATTATCTCAGCCCTGGTGACCAGCACATTTCATTGAGAAGCAGCTCCTCCTCAGGTCCTGAAGACCCAGACCAAGTTTGAGCCACCGTACGCCTGCTGGTGGGCGGGAAGCTGAACGTGCACATGAATCCCCCCCAGGTGAAGGCCACCATCATCAGTGAGCAGCAGGCCAAGTCTCTGCTTAAAAATGAGAACACCCGCAAXXXXXXXXXXXTGGTGAGATCCTGAACAACCTGCTGCGTGATGGAGTACCACCAAGCCACGGGCAGCCCTCAXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XX  
XX  
XX  
GGCCGCAGCTGTGTGAGGCGCTCAACATGAAATTCAAGGCCAAGTGCAGAGCAACCGGGGCTGACCAAGGAGAACCTCGTGTCTCTGGCGCAAACTGTTCAACAACAGCAGCAGCCACCTGGAGGACTACAGTGCCTGTCCGTGCTCTGTTCCAGTTCAACAGGGAGAATTTACCAGGACGGAATTACACTTTCTGGCAATGTTTTGACGGTGTGATGGAAGTGTAAAAAACATCTCAAGCCTCATTGGAATGATGGGGCCATTTTGGGGTTTGTAACAAGCAACAGGCCATGACCTACTATTAAACAAGCCAGATGGGACCTTCTCTGAGATTAGTGACTCAGAAATTGGCGGCATACCAATTGCTTGGAAGTTTGATTCTCAGGAAAGAATGTTTTGGAATCTGATGCCTTTTACCACCAGAGACTTCTCCATTGGTCCCTAGCCGACCGCTTGGGAGACTTGAATTACCTTATCTACGTGTTTCTGATCGGCCAAAAGATGAAGTATACTCCAATACTACACACCAGTTCCCTGCGAGTCTGCTACTGCTAAAGCTGTTGATGGATACGTGAAGCCACAGATCAAGCAAGTGTGTCCTGAGTTTGTGAACGCATCTGCAGATGCCGGGGCGGCAGCGCCACGTACATGGACCAGGCCCTCCCCAGCTGTGTGTCCCCAGGCTCACTATAACATGTACCCACAGAACCCTGACTCAGTCTTGACACCGATGGGGACTTCGATCTGGAGGACACAATGGACGTAGCGCGCGTGTGGAGGAGCTCCTGGGCGGCAATGGACAGTCAGTGGAATCCCGCACGCACAATCGTGACCCCGCGACCTCTCCATCTTCAGCTTCTTCATCTTCACCAGAGGAACTACTCTTGTGGATGTTTTAATTCCATGAATCGCTTCTCTTTGAAACAATACTCATAATGTGAAGTGTTAATAC TAGTTGTGACCTTAGTGTTTCTGTGCAATGGTGGCACCAGCGAAGGGAGTGCGAGTATGTGTTTGTGTGTGTGTGTGTGTGTGTGTGTGTGCGTGTTCGACGTTATGGTGTTCCTCCCTCACTGTCTGAGAGTTTAGTTGTAGCAG

A

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**FIGURE 4850A**

GCGGAGCCGGAGGAGCCGCCGCAAAGATGGAGGAGCCGTCGAGGAGGTGCTGCCGCCGCTGCCGCCGCCGCTGCT  
GCCGCCGCCGCCGCCGGAAGCCGGAGCTCGAGCCGCAGCGGGGATGCCGTTCTGAGTGCCTGACTGCCTCGCCCCG  
AAGGATGGCCTCGGATGGGCATTAGAGGCACGGCGGCCCGGGCTCCCGTCCCGTCCGTCTGTCTGTTATCGTCT  
GTCTCTCTTGACATCACCGCAGCTCCACCCCTCCCGTCCAGCCCCAACGCCAGCTTCCTGCAGGCCAGAGC  
CGGCATGAACCTCTCCCAACGAGTCGGATGGGATGTAGGTCGGGAACCATCCTTGGAATCCTGCCCGGACTTC  
TCTGCACAGCATCCCTGTGACAGTGGAGGTGAAGCCGGTGTGCCAAGAGCCATGCCAGTTCATGGGGGGTGG  
GGGTGGAGGCAGCCCCAGCCCTGTGGAGCTACGGGGGGCTCTGGTGGGCTCTGTGGACCCACACTGCGGGAGCA  
GCAATGCAGCAGGAGCTCCTGGCGCTCAAGCAGCAGCAGCAGCTGCAGAAGCAGCTCCTGTTGCTGAGTTCCA  
GAAACAGCATGACCACCTGACAAGGCAGCATGAGGTCCAGCTGCAGAAGCACCTCAAGCAGCAGCAGGAGATGCT  
GGCAGCCAAGCAGCAGCAGGAGATGCTGGCAGCCAAGCGGCAGCAGGAGCTGGAGCAGCAGCGGCAGCGGGAGCA  
GCAGCGGCAGGAAGAGCTGGAGAAGCAGCGGCTGGAGCAGCAGCTGCTCATCTGCGGAACAAGGAGAAGAGCAA  
AGAGAGTGCCATTGCCAGCACTGAGGTAAAGCTGAGGCTCCAGGAATTCTCTGTGCAAGTCAAAGGAGCCAC  
ACCAGGCGGCCCTCAACCATTCCTCCACAGCACCCCAAATGCTGGGGAGCCACCATGCTTCTTGGACCAGAG  
TTCCCTCCCGAGAGCGGCCCTGGGACGCTCCTCTACAAACTGCCCTTGGCTGGGCCCTACGACAGTGC  
AGACGACTTCCCCCTCCGCAAAACAGCCTCTGAACCCAACCTGAAAGTGCGTTCAAGGCTAAACAGAAAGGTGGC  
TGAGCGGAGAAGCAGTCCCCCTGCTGCTCGCAAGGATGGGACTGTTATTAGCACCTTTAAGAAGAGAGCTGTTGA  
GATCACAGGTGCCGGGCTGGGGCGTCTGCTCGTGTGTAACAGCGCACCCGGCTCCGGCCCCAGCTCTCCCAACAG  
CTCCACAGCACCATCGCTGAGAATGGCTTTACTGGCTCAGTCCCCAACATCCCCACTGAGATGCTCCCTCAGCA  
CCGAGCCCTCCCTCTGGACAGCTCCCCAACAGTTTACGCTCTACACGTCTCCTTCTCTGCCAACATCTCCCT  
AGGGCTGCAGGCCACGGTCACTGTACCAACTCACACCTCACTGCCTCCCCGAAGCTGTGACACAGCAGGAGGC  
CGAGAGGCAGGCCCTCCAGTCCCTGCGGCAGGGTGGCAGCTGACCGGCAAGTTTATGAGCACATCCTCTATTCC  
TGGCTGCCTGCTGGGCGTGGCACTGGAGGGCGACGGGAGCCCCACGGGCATGCCTCCCTGCTGCAGCATGTGCT  
GTTGCTGGAGCAGGCCCGGCAGCAGAGCACCTCATTTGCTGTGCCACTCCACGGGCAGTCCCCACTAGTGACGGG  
TGAACGTGTGGCCACCAGCATGCGGACGGTAGGCAAGCTCCCGCGGCATCGGCCCTGAGCCGCACTCAGTCTCT  
ACCGCTGCCGCAGAGTCCCCAGGCCCTGCAGCAGCTGGTCATGCAACAACAGCACCAGCAGTTCTTGAGAAGCA  
GAAGCAGCAGCAGCTACAGCTGGGCAAGATCCTCACCAAGACAGGGGAGCTGCCAGGCAGCCCACCCACCC  
TGAGGAGACAGAGGAGGAGCTGACGGAGCAGCAGGAGGTCTTGTGGGGGAGGGAGCCCTGACCATGCCCCGGGA  
GGGCTCCACAGAGAGTGAGAGCACACAGGAAGACCTGGAGGAGGAGGACGAGGAAGAGGATGGGGAGGAGGGA  
GGATTGCATCCAGGTTAAGGACGAGGAGGGCGAGAGTGGTGTGAGGAGGGGGCCGACTTGGAGGAGCCTGGTGC  
TGGATACAAAAAAGTGTCTCAGATGCCAGCCGCTGCAGCCTTTCAGGTGTACAGGCGCCCTCAGCCTGGC  
CACTGTGCCCCACCAGGCCCTGGGCCGTACCCAGTCTCCTCTGCTGCCCTGGGGGCATGAAGAGCCCCCAGA  
CCAGCCCGTCAAGCACCTCTTACACAGGTGTGGTCTACGACACGTTTATGCTAAAGCACCACTGATGTGCGG  
GAACACACAGTGCACCTGAGCATGTGCGCGGATCCAGAGCATCTGGTCCCGGCTGCAGGAGACAGGCCTGCT  
TAGCAAGTGCAGCGGATCCGAGGTGCGAAAGCCACGCTAGATGAGATCCAGACAGTGCCTCTGAATACACAC  
CCTGCTCTATGGGACCAGTCCCCTCAACCGGCAGAAGCTAGACAGCAAGAAGTTGCTCGGCCCATCAGCCAGAA  
GATGTATGCTGTGCTGCCCTTGTGGGGGCATCGGGGTGGACAGTGACACCGTGTGGAATGAGATGCACTCCTCCAG  
TGCTGTGCGCATGGCAGTGGGCTGCCTGCTGGAGCTGGCCTTCAAGGTGGCTGCAGGAGAGCTCAAGAATGGATT  
TGCCATCATCCGGCCCCCAGGACACCACGCCGAGGAATCCACAGCCATGGGATTCTGCTTCTTCAACTCTGTAGC  
CATCACCGCAAAACTCCTACAGCAGAAGTTGAACGTGGGCAAGGTCTCATCGTGGACTGGGACATTACCATGG  
CAATGGCACCCAGCAGGCGTTCTATAATGACCCCTCTGTGCTCTACATCTCTCTGCATCGCTATGACAACGGGAA  
CTTCTTTCCAGGCTCTGGGGCTCCTGAAGAGGTTGGTGGAGGACCAGGCGTGGGGTACAATGTGAACGTGGCATG  
GACAGGAGGTGTGGACCCCCCATTGGAGACGTGGAGTACCTTACAGCCTTACAGACAGTGGTGATGCCATTGC  
CCACGAGTTCTACCTGATGTGGTCTTAGTCTCCGCCGGGTTGATGCTGTTGAAGGACATCTGTCTCCTCTGGG  
TGGCTACTCTGTACCCGCCAGATGTTTTGGCCACTTGACCAGGCAGCTGATGACCCTGGCAGGGGGCCGGGTGGT  
GCTGGCCCTGGAGGGAGGCCATGACTTGACCGCCATCTGTGATGCCTCTGAGGCTTGTGTCTCGGCTCTGCTCAG  
TGTAAGCTGCAGCCCTTGATGAGGCAGTCTTGACAGCAAAAGCCCCAACATCAACGCAGTGGCCACGCTAGAGAA  
AGTCATCGAGATCCAGAGCAAACTGGAGCTGTGTGAGAAGTTCGCCGCTGGTCTGGGCCGCTCCCTGCGAGA  
GGCCCAAGCAGGTGAGACCGAGGAGGCCGAGACTGTGAGCGCCATGGCCTTGTGTGCTGGGGGCCGAGCAGGC

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**FIGURE 4850B**

CCAGGCTGCGGCAGCCCGGGAACACAGCCCCAGGCCGGCAGAGGAGCCCATGGAGCAGGAGCCTGCCCTGTGACG  
CCCCGGCCCCCATCCCTCTGGGCTTCACCATTGTGATTTGTTTATTTTCTATTAAAAACAAAAGTCACACA  
TTC



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**FIGURE 4851**

MNSPNESDGMSSGREPSLEILPRTSLHSIPVTVEVKPVLPRAMPSSMGGGGGGSPSPVELRGALVGSVDPTLREQQ  
LQQELLALKQQQQLQKQLLFAEFQKQHDHLTRQHEVQLQKHLKQQQEMLAAKQQQEMLAAKQQELEEQQOROREQQ  
RQEELEKQRLQQLLILRNKEKSKESAIASTEVLRLQEFLLSKSKEPTPGGLNHSPLQHPKCWGAHHASLDQSS  
PPQSGPPGTPPSYKLPPLPGPYDSRDDFPLRKTASEPNLKVRSRLKQKVAERRSSPLLRRKDGTIVISTFKKRAVEI  
TGAGPGASSVCNSAPGSGPSSPNSSHSTIAENGFTGSVPNIPTEMPLQHRALPLDSSPNQFSLYTSPSLPNISLG  
LQATVTVTNSHLTASPKLSTQQEAERQALQSLRQGGTLTGKFMSTSSIPGCLLGVALEGDGSPHGHASLLQHVLL  
LEQARQQSTLIAVPLHGQSPLVTGERVATSMRTVGKLPRRRPLSRTQSSPLPQSPQALQQQVLMQQQHQQFLEKQK  
QQQLQLGKILTKTGELPRQPTTHPEETEEELTEQQEVLLGEGALTMPREGSTESESTQEDLEEEDDEEDGEEED  
CIQVKDEEGESGAEEGPDLEEPGAGYKKLFSDAQPLQPLQVYQAPLSLATVPHQALGRTQSSPAAPGGMKSPPDQ  
PVKHLFTTGVDYDTFMLKHQCMCGNTHVHPEHAGRIQSIWSRLQETGLLSKCERIRGRKATLDEIQTIVHSEYHTL  
LYGTSPLNRQKLDKLLGPISQKMYAVLPCGGIGVDSDTVWNEMHSSSAVRMAVGCLLELAFKVAAGELKNGFA  
IIRPPGHAEESTAMGFCFFNSVAITAKLLQKLVNKGVLIVDWDIHHGNGTQQAFYNDFSVLYISLHRYDNGNF  
FPGSGAPEEVGGGPGVGYNVNVAWTGGVDPPIGDVEYLTAFTVVMPIAHEFSPDVVLVSAGFDAVEGHLSPGG  
YSVTARCFGHLTRQLMTLAGGRVVLAELEGHDLTAICDASEACVSALLSVELQPLDEAVLQQKPNINAVATLEKV  
IEIQSKHWSCVQKFAAGLGRSLREAQAGETEEAETVSAMALLSVGAEEQAQAAAAREHSRPAEEPMEQEPAL

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**FIGURE 4852**

CGGAGGAGAGCGCAGGAGGAAACAGTACCGGCTGGAGGCCGGTCTTGCAGGAGCGGGGGACTGCTGGGGGCGGGG  
CTTGGTGGTGACTGCTGGCGGGGCGGGGCTGGGGCTCAGAGGGGTGGGCTTTGGAGATCAGAGGGTCGACGCTG  
CTTCGTTGCCCTGGACTCTGGTTTCCGCCCTGGAGCAAGCCGGGGCTGGTCGGCAGCTGGGCCGCCATGGAGTCC  
ACGCTGGGCGCGGGCATCGTGATAGCCGAGGCGCTACAGAACCAGCTAGCCTGGCTGGAGAACGTGTGGCTCTGG  
ATCACCTTTCTGGGCGATCCCAAGATCCTCTTTCTGTTCTACTTCCCCGCGGCCTACTACGCCTCCCGCCGTGTG  
GGCATCGCGGTGCTCTGGATCAGCCTCATCACCGAGTGGCTCAACCTCATCTTCAAGTGGTTTCTTTTGGAGAC  
AGGCCCTTTTGGTGGGTCCATGAGTCTGGTTACTACAGCCAGGCTCCAGCCCAGGTTACACAGTTCCTCTCTCT  
TGTGAGACTGGTCCAGGCAGCCCTTCTGGACACTGCATGATCACAGGAGCAGCCCTCTGGCCCATAAATGACGGCC  
CTGTCTTCGCAGGTGGCCACTCGGGCCCGCAGCCGCTGGGTAAGGGTGATGCCTAGCCTGGCTTATTGCACCTTC  
CTTTTGGCGGTGGCTTGTGCGGAATCTTCATCTTAGCACATTTCCCTCACCAGGTGCTGGCTGGCCTAATAACT  
GGCGCTGTCTGGGCTGGCTGATGACTCCCCGAGTGCCTATGGAGCGGGAGCTAAGCTTCTATGGGTTGACTGCA  
CTGGCCCTCATGCTAGGCACCAGCCTCATCTATTGGACCCTCTTTACACTGGGCCTGGATCTTTCTTGGTCCATC  
AGCCTAGCCTTCAAGTGGTGTGAGCGGCCTGAGTGGATACACGTGGATAGCCGGCCCTTTGCCTCCCTGAGCCGT  
GACTCAGGGGCTGCCCTGGGCCTGGGCATTGCCTTGCACTCTCCCTGCTATGCCAGGTGCGTCGGGCACAGCTG  
GGAAATGGCCAGAAGATAGCCTGCCTTGTGCTGGCCATGGGGCTGCTGGGCCCCCTGGACTGGCTGGGCCACCCC  
CCTCAGATCAGCCTCTTCTACATTTTCAATTTCTCAAGTACACCCTCTGGCCATGCCTAGTCCTGGCCCTCGTG  
CCCTGGGCAGTGCACATGTTTCAAGTGGCCAGGAAGCACCGCCCATCCACTCTTCTCTAGCTTCTTGTGTGCTTCCCT  
TTCCTTTCCCTCCCAAAAGCCAACTCTGTGACCACCACACTCCAGGAGGCAGCCCCATCCCTTCCAGCCCC  
TAAGTAGGCCCTCCCTCCCTAAATCTGCTTCCGACCACCTGGTCTTAGCCCCAAAGATGGGCCTTCTCTCTCC  
CAGATAAGTTGGTCTCCCTCTGCCTTTCCTCTCAAGCCCCAAAGAGCAAAGGCAACAGCAAGACCAGCGGGTT  
CTTGCAACACTGTGAGGGGCGAGCCAGGCGGGCCCCAATAAAGCCCTTGAATACTT

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**FIGURE 4853**

MESTLGAGIVIAEALQNQLAWLENVWLWITFLGDPKILFLFYFPAAYYASRRVGI AVLWISLITEWLNLI FKWFL  
FGDRPFWWVHESGYYSQAPAQVHQFPSSCETGPGSPSGHCMITGAALWPIMTALSSQVATRARSRWVRVMP SLAY  
CTFLLAVGLSRIFILAHFPHQVLAGLITGAVLGWLMTPRVPMERELSFYGLTALALMLGTSLIYWILFTLGLDLS  
WSISLAFKWCERPEWIVDSRPFASLSRDSGAALGLGIALHSPCYAQVRRQLGNGQKIACLVLAMGLLGPLDWL  
GHPPQISLFYIFNFLKYTLWPCLVLALVPWAVHMFSAQEAPPIHSS

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**FIGURE 4854**

GGCAGGAGGCCGACGCGGACTGCCCTTTCCCAAGATGCGCTCGAAGATAGGTTGAGACGGTGGATGTTGCAGCT  
GATCATGCAGTTGGGTTGGGTGCTGCTCACACGCTGCCCCCTTTGGGGCTGCTTCAGCCAGCTCATGCTGTACGC  
TGAGAGGGCTGAGGCACGCCGAAGCCCGACATCCCAGTGCCTTACCTGTATTCGACATGGGGGCAGCCGTGCT  
GTGCGCTAGTTTCATGTCCCTTTGGCGTGAAGCGGCGCTGGTTGCGGCTGGGGGCCGCACTCCAATTGGCCATTAG  
CACCTACGCCGCCTACATCGGGGGCTACGTCCACTACGGGGACTGGCTGAAGGTCGGTATGTACTCGCGCACAGT  
TGCCATCATCGGCGGCTTTCTTGTGTTGGCCAGCGGTGCTGGGGAGCTGTACCGCCGGAACCTCGCAGCCGCTC  
CCTGCAGTCCACCGGCCAGGTGTTCTTGGGTATCTACCTCATCTGTGTGGCCTACTCACTGCAGCACAGCAAGGA  
GGACCGGCTGGCGTATCTGAACCATCTCCAGGAGGGGAGCTGATGATCCAGCTGTTCTTCGTGCTGTATGGCAT  
CCTGGCCCTGGCCTTTCTGTGCTAGGCTACTACGTGACCCCTCGCTGCCCAGATCCTGGCTGTACTGCTGCCCCCTGT  
CATGCTGCTCATTGATGGCAATGTTGCTTACTGGCACAACACGCGGCGTGTGAGTTCTGGAACAGATGAAGCT  
CCTTGGAGAGAGTGTGGGCATCTTCGGAAGTGTGTCATCCTGGCCACTGATGGCTGAGTTTTATGGCAAGAGGC  
TGAGATGGGCACAGGGAGCCACTGAGGGTCACCCCTGCCTTCCTCCTTGCTGGCCAGCTGCTGTTTATTTATGCT  
TTTTGGTCTGTTTGTGTTGATCTTTTGCTTTTTTAAAATTGTTTTTGCAGTTAAGAGGCAGCTCATTGTCCAAA  
TTTCTGGGCTCAGCGCTTGGGAGGGCAGGAGCCCTGGCCTAATGCTGTACAGGTTTTTTTCTGTTAGGAGAGC  
TGAGGCCAGCTGCCCCTGAGTCTCCTGTCCCTGAGAAGGGAGTATGGCAGGGCTGGGATGCGGCTACTGAGAGT  
GGGAGAGTGGGAGACAGAGGAAGGAAGATGGAGATTGGAAGTGAGCAAATGTGAAAAATTCCTCTTTGAACCTGG  
CAGATGCAGCTAGGCTCTGCAGTGTGTTTGGAGACTGTGAGAGGGAGTGTGTGTGTTGACACATGTGGATCAGG  
CCCAGGAAGGGCACAGGGGCTGAGCACTACAGAAGTCACATGGGTCTCAGGGTATGCCAGGGGCAGAAACAGTA  
CCGGCTCTCTGTCACTCACCTTGAGAGTAGAGCAGACCCTGTTCTGCTCTGGGCTGTGAAGGGGTGGAGCAGGCA  
GTGGCCAGCTTTGCCCTTCCTGCTGTCTCTGTTTCTAGCTCCATGTTGGCCTGGTGGGGGTGGAGTTCCCTCCC  
AAACACCAGACCACACAGTCTCCAAAAATAAACATTTTATATAGACAAAAA

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**FIGURE 4855**

MASKIGSRRWMLQLIMQLGSVLLTRCPFWGCFSQLMLYAERAEARRKPDIPVPYLYFDMGAAVLCASFMSFGVKR  
RWFALGAALQLAISTYAAAYIGGYVHYGDWLKVRMYSRTVAIIGGFLVLASGAGELYRRKPRSRSLQSTGQVFLGI  
YLICVAYSLQHSKEDRLAYLNHLPGGELMIQLFFVLYGILALAFLSGYVTLAAQILAVLLPPVMLLIDGNVAYW  
HNTRRVEFWNQMKLLGESVGIFGTAVILATDG

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**FIGURE 4856**

AAAGGACCGAGGCGTGCAGCGGACAGCAGATGGATCCCGCGGCCAGCAGCTGCATGAGGAGCCTCCAGCCCCCAG  
CCCCTGCTGTTGGGCTGCCTTCGAAACCCCCACTCGGAAGGCAATGGGGCCTCAGGGCTACCCCACTACCCGCCCA  
CCCCGTTCTCCTTCCACCAGAAACCAGACTTCCTGGCGACAGCGACGGCAGCGTACCTTGACTTCTCAGCCTCCT  
GCCTGGCAGCCACCCACACAGCCTGCCCCAGGAGGAGCACATCTTCACTGAGCAGCACCCCGCTTCCCACAGT  
CCCCCACTGGCACTTCCCTGTCTCAGACGCCCCGGCGCAGGCCCACTCAGGCCCGGCAGGGGGTTCCAAGGAAA  
TGGGGACCAGCAGCCTGGGCCTGGTGGACACCACAGGAGGCCAGGCGATGACTACGGGGTGTCTGGGAGCACTG  
CCAATGAGACAGAGAAGAAATCATCCAGGCGGAGAAAGGAGAGTTTCAACAACCAGGAGAACAGAGGGAAGCCGG  
AGGGCAGCAGCAAAGCCCGCAAGGAGAGGACGGCCTTACCAAGGAGCAGCTGCGAGAGCTGGAGGCAGAGTTTG  
CCCATCATAACTACCTGACTCGGCTCCGCAGATATGAGATTGCGGTAAACCTGGACCTCTCTGAGCGCCAGGTCA  
AAGTGTGGTTCCAGAACCAGGATGAAGTGAAGCGTGTGAAGGGAGGTACGCCATCTCCCCCAATGGGCAGG  
ACCTTGAGGATGGGGACTCCACAGCCTCTCCAAGTTTCAAGTGTGAGATTCTGCATGGAGGAAAAATGACTAAGGAC  
TGAGCCCCCTACCCAATACCCCCACCCCAATCCCACCTTACCCTCTTCTTCCCCAGCCAGGGCAGCCTCTCC  
ACATCTTTCCCTGACTCTTGATATGAACTGCCCAGCATTCCTGGGAGTCTTAGGATTTTCTAGGAAGTTCTGT  
CCAGCCTCTTAGCAGCCTCTTCCCTAGGGCCTTTGCTCCCACTCTCATGGAATCAGACAGAGATCCTACCGGG  
CCGGATGAATCTGGAAACAGCTTCAAGATAGTCTTCTCAGCGTCTCTTGGCTGCCACCCATGCCCTCCTCCTAC  
CGCTGTTCTCCTAGGTGAGCCAGGCCTCCTCCTGGTCTGGACACCACCTGGCCTGGTGGGAGAGAGCTTTGGAA  
CCAGCTGGCGACTCGGAAAGTAAATGCTTCAAAGGAAGGAAATGACAGAGACACACGCCCTTGCCACCTTCTCT  
CTGTAGGCTGCACATCTGAGGCTTTGGGGCCCTTAGTTGTCCCGAAACCCCAAGAAAAATCAGAATGAGGAGAG  
TCAAGGACAGCAACTCAGCTGCTGCAAGCCAGAAACACATCCCTGTCTCCAAATTTGTTGGCTAAGTGGAGACAC  
TTCTGAGAACTGACTAGAGAAGACAGAAAAATAGCCCGATGTAGGTTTTCGGTGTCCCCATATAGCCCCGTCCACA  
CAGGCTTACTGGGTGGACAAGAATGAACCCATGACAGCACCTGCTGCTTCAAATCAAATCAATTTAGGGATA  
CAGCAGGGGCTGTTGGGCTGTGCTCCAGAGAAAAGGAGCAGCTACTCCTTTTAAATCCACGATTCTGGATTGAA  
AACCTGTCCAGATGCTGAGTTGTTGGGCTGAACAACCTAGGAGCTGAAAACAACGTAGAGGCTGGAAAGTGTCCCC  
TGCATTCTGGAGGGGAGGGGAGATAATAAGGAGGGCTGCTGGGTGAGGGCCTGGAGATGTGGAACCCCTGGAGTGG  
AAGGTTCTCCAGTGACAGTGTCTGTGACTGCAAAAGGGGACAAGAAAAATCCCTCTTCTCCTCCATGGGATGGATTT  
AAGCTCTTGCTGTGTGTTCTACAAATGCTGTTATTGTGGGAGGAAATGCTAGGTTTTTGTGTGTGGACTGCCAG  
ACCTCAGCCAGGTCTTCTGGAGATGACATTTGAGGACTGATGGCCAAAGAGCATGGGGGACTGAAGCCCTGGCTG  
CCTCAGCGCTCTGTCTCCCAACACCAGCTGGTGTGTCAGAGGGAGGTCAACGTGAGTTTGGATCTCTTGTACGCA  
GATGTAATCATTACATGTAAAAATAACCCACCTCCCCACCCCAAAAAGGGCAAGAGCTGTGGAAAAATGATTGC  
CAAATGAGATGGCTGGTTAGAGCATGATTTTTTCTAAAGCATACTTCATATATTTTCTTAAGATTACATCAAGCT  
AATTGTGCGAGCTCAATTCACCTTTGTAAGAAAACTCTCGGAGAAATAAATCAATAAAAAGC

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**FIGURE 4857**

GAGCGGCCCCGAGGAGGACGCGAGCGGCGCTGGAGCTTTTCGTCGGACGAGGCGGTGGAGGTTGAGGAGGTTATTGAG  
GAGTCCCGCGCAGAGCGTATCAAGCGCAGACACTGCGGCGCGTGGACGACTTCAAGAAGGCCTTCTCCAAGGAGA  
AGATGGAGAAGACCAAGGTGCGTACCCGCGAGAACCTGGAGAAGACGCGCCTCAAGACCAAGGAAAACCTGGAGA  
AGACGCGGCACACCCTGGAGAAGCGCATGAACAAGCTGGGCACGCGCCTGGTGCCCGCCGAGCGGCGCGAGAAAC  
TGAAGACGTCGCGGGACAAGTTGCGCAAATCCTTCAGCCCCGACCACGTGGTGTACGCGCGCTCCAAGACCGCGG  
TCTACAAGGTGCCACCCTTCACCTTCCACGTCAAGAAGATCCGCGAGGGCCAGGTGGAAGTGCTCAAGGCCACCG  
AGATGGTGGAGGTGGGCGCCGACGACGACGAGGGCGGCGGAGCGCGGGGAGGCCGCGACCTGCGGCGCGGGAGC  
AGCCCCGACGTGCACGCGCTGCTGGAGATCACCGAGGAGTCGGACGCGCTGCTGGTGGACAAGAGCGACAGCGAC  
TGAGCCGCCCCCGCTGCCACCCACCCCATTCCTCGCTCCTTCCGAACTTCCTCTTTCGCATTCTCTCTCGGCTCG  
AGCTGGCTGAGATTTTTCTAAATTGAAAACAGCCCCCTCCCCACACCTCCAGGAACTCCACTCCCAGTCTTAG  
AGCTGTTAGGACCCGATGGGGAGGCAGCCCCCGAGTGGACAGCCCCCGCTTGGACACAGTCCGAGTGAATGGG  
AAGGGAATGGTCAATCCCTGTCCTGGTTGTCCAAGTCGGGATCTCAGAGGAAATTGCAGTGATTCCACGGTTAGG  
CCCCCTGGGGGGGCTGCCTTCCCCTCAGCCTCTCCCCACACCACCCACCCAGCTGCTGTATTCCGCTCACTGA  
GCTCTTCTTCAATTCTCACCTGATCCCTGGGGGACTCAAAGCCAAAACCTGCCAAAAGAGGAAAGATTGAATCCTA  
AAGGGGATCCTTGCCCCATGGGAGGCCCCCTACTAGAAGGACGTGAAAGCAGCTTTGGGGGAACTGAGGCAG  
TGGGGAAGACAGAGCAGAATGAGCCCTCACCTGGCTGGGGGTCCAGCACAGGCTGTATCTGCAGAGGGTCCAG  
AGGAACGCTGGAGCCAAGAGAAGCCCTGGGAAGGAGGGGTGGGGAACGACATGCATGTGAGGGATGGCACACTGA  
TGTGTTTATGCACCTGTACACAGGAGCGCATGGCCATGGCTTTGAAAGGAGAATGAAAAATAGAAGAAGGTCG  
GCCGGGCTTGGTGGCTTATGCCTGTAACCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACCTGAGGTCAGGA  
GTTCCGGGACCAGCCTGGCAACACCCCATCTCTACTAAGCGAAAACCCATCTCTACTAAAATTACAAAATTAGC  
TGGGCATGATTGCGCATGCCTGTAATCCAGCTACTTTGGAGGCTGAGGTGGGAGAATTGCTTGAACCTGGGAG  
GTGGAGGTTGCAGTGAGCCAAGGTCGCGACACTGCACTCCAGCCTGGGTGACAGAGTGAGACTCCATCTCAACAG  
AAGGAAAAAAAAGGAAAATAGGAGAAGGTGGAATGGGTGAAGAGAGAAGTCCCTCACTAGCTGCATGAGAAAT  
CTATCTTACTGTGGTTCTCCATGGGCAGCAGGACCATTTTTCAGAATCAAGAGGGAGGACAGTGTGAGAAGGCGA  
TGATCCAAAGAAGACAGAGAGGTGAGCCCCACCCGATCCCTCAAATGGGCTCTTGGAGGCACCCCAAGGGCAGC  
CCATTTCTCAAAGTCCAGAAAATTAGGGTCCAGAAGGGGGCAGCAGCAGGCTGGGAGTTAGGAGGGAGAGCAGG  
GTGCCGGCCCTGCCACCAAGTTGAGAGCTGGAGGGGAGGTGGGGAGAGAACATCACAGAGCAGCCAGCCCTGGTT  
CACTCCTGGCAGTTTCTTCTCAAGCTCCTTCCTTAGGAGCATGGTGGCACGTGCCTGTGGTCTCAGCTACTTGGG  
AGGCTGAGGCGGGAGGATCGCCAGAGCCAGGAGTTTGAGGCTGCAGTGAGCTATGAGGGTGCCTCTGTGCTCCA  
TCCTAGGCAACAGAGTGAGACGCTGTTTAAAAAGGAAAAATCCTTCCTAGAGCTAGTATCCTAAAGCTGCAGA  
GCTAGCCAGACCTCATTGGTTTCTTGTCTTGGGGTGCTTTTCTGAATCTTTGGGGGTGAAGGGAGTGTGTC  
TCCCAGTCCAGAGGCCTGATTCTGTTTCGACTGGGTTCTCAAGACACGACCAGGTTCTCAAGACACGAGTCCCCT  
TGTTCTTCCCCATTAAAGGGGGTTTGTCAAGCAAGAACAGCCCCCTCTCCCAGTCACAGCCTGAAGGGAGGCC  
CCGAGAGCTTCTCTTCCCCCACCTGCTCCTTACCTTCTCTGCCCTGCTTTTGAAGTGCAGTTTCAATTGTTT  
TAAGGGATTGGGGGAGGGAGCCTGGGGACACAAACCTTTTATACAATACAAAGCTTTGCTTTTTTTTTTTTTTCT  
TTCCTTTTCCCTTTTCTCGGTTCTTCTCTCTCTGAATGCGTGAAGACCCCTCTGCCGAGGGAGGTTGGGGATT  
GTGGGACAAGGTCCCTTGGTGTGATGGCTGAAGGGGCTGAGCTGTGGGCAGATGCAGTTTTCTGTGGGCTTG  
GGGAACCTCTCACGTTGCTGTGTCTGGTGGAGAGCCGACCAATAAACCTGCTTTTCT

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**FIGURE 4858**

MEKTKVRTRENLEKTRLKTKENLEKIRHTLEKRMNKLGTRLVPAERREKLKTSRDKLKSF<sup>1</sup>TPDHVVYARSKTAV  
YKVPFFTFHVKKIREGQVEVLKATEMVEVGADDD<sup>2</sup>EGGGARGGRRPAAREQPRRARAAGDHRGVGRRAGGQERQRL  
SRPRCHPPHSSL<sup>3</sup>LPN<sup>4</sup>FLFRILSRLELAEIFLN



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**FIGURE 4859**

ATGGCCGTATTCCGGTCGGGTCTCCTGGTGCTGACGACGCCGCTGGCCTCCCTAGCCCCCTCGCCTGGCCTCCATC  
CTGACCTCGGCGGCCCCGGCTGGTGAATCACACACTCTATGTTACCTGCAGCCGGGCATGAGCCTGGAGGGCCCCG  
GCTCAGCCCCAGTACAGCCCCCGTGCAGGCCACGTTTGAGGTTCTTGATTTTCATCACGCACCTCTATGCTGGCGCC  
GACGTCCACAGGCACTTGGACGTGAGAATCCTACTGACCAATATCCGAACCAAGAGCACCTTTCTCCCTCCCTG  
CCCACCTCAGTCCAGAATCTCGCCACCCGCCAGAAAGTCGTGTTGACAGATTTCCAGACCTGGATGGAAGCCAG  
TACAACCCGGTCAAACAGCAGCTAGTGCCTTACGCCACCAGCTGTTACAGCTGTTGTCCGCGACTGGCCTCGGTG  
CTGCTATACTCCGATTATGGGATAGGAGAAGTGCCCGTGGAGCCCCCTGGATGTCCCCTTACCCTCCACGATCAGG  
CCAGCTTCCCCGTGGCCGGGTCTCCAAAGCAGCCGGTGGCTGCTACTACCGTGGCGCTGTCCGGTGGCACGTTT  
GACCGCCTGCACAACGCCCCACAAGGTGTGCTCAGTGTGCGGTGCATCCTGGCCCAGGAGCAGCTTGTGGTGGGA  
GTAGCAGACAAAGATCTGTTGAAGAGCAAGTTGCTCCCTGAGCTGCTCCAACCTTATACAGAACGTGTGGAACAT  
CTGAGTGAATTCTGGTGGACATCAAGCCCTCCTTGACTTTTGATGTCATCCCCCTGCTGGACCCCTATGGGCCC  
GCTGGCTCTGACCCCTCCCTGGAGTTCCCTGGTGGTCAGCGAGGAGACCTATCGTGGGGGATGGCCATCAACCGC  
TTCCGCCTTGAGAATGACCTGGAGGAAGTTGCTTTGTACCAGATCCAGCTGCTGAAGGACCTCAGACATACGGAG  
AATGAAGAGGACAAAGTCAGCTCCTCCAGCTTCCGCCAGCGAATGTTGGGGAACCTGCTTCGGCTCCATATGAA  
AGGCCAGAGCTCCCCACATGTCTCTATGTAATTGGGCTGACTGGCATCAGTGGCTCTGGGAAGAGCTCAATAGCT  
CAGCGACTGAAGGGCTGGGGCGTTTGTGATTGACAGTGACCACCTGGGTGTCATCGGGCTATGCCCCAGGTGGC  
CCTGCCTACCAGCCTGTGGTGGAGGCCCTTTGGAACAGATATTCTCCATAAAGATGGCATCATCAACAGGAAGGTC  
CTAGGCAGCCGGGTGTTTGGGAATAAGAAGCAGCTGAAGATACTCACGGACATTATGTGGCCAATTATCGCAAAG  
CTGGCCCGAGAGGAGATGGATCGGGCTGTGGCTGAGGGAAAGCGTGTGTGTGATTGATGCCGCTGTGTTGCTT  
GAAGCCGGCTGGCAGAACCTGGTCCATGAGGTGTGGACTGCTGTGTCATCCAGAGACTGAGGCTGTAAGACGCATT  
GTGGAGAGGGATGGCCTCAGTGAAGCCGCGCTCAAAGCCGGCTGCAGAGCCAGATGAGCGGGCAGCAGCTTGTG  
GAACAGAGCCACGTGGTGTCTCAGCACCTTGTGGGAGCCGCATATCACCCAACGCCAGGTGGAGAAAGCCTGGGCC  
CTCTTGCAAGCGCATTCCCAAGACTCATCAGGCCCTCGACTGA

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**FIGURE 4860**

MAVFRSGLLVLTTPLASLAPRLASILTSAARLVNHTLYVHLQPGMSLEGPAQPQSSPVQATFEVLDFITHLYAGA  
DVHRHLDVRILLTNIRTKSTFLPPLPTSVQNLAHPPEVVLDFQTLDG SQYNPVKQQLVRYATSCYSCCPRLASV  
LLYSDYGIGEVPEPLDVPLPSTIRPASPVAGSPKQPVRGYRGAVGGTFDRLHNAHKVLLSVACILAEQLVVG  
VADKDLLKSKLLPELLQPYTERVEHLSEFLVDIKPSLTFDVIPLLDPYGPAGSDPSLEFLVSEETYRGGMAINR  
FRLNDLEELALYQIQLLKDLRHTENEEKVSSSSFRQRLGNLLRPPYERPELPTCLYVIGLTGISGSGKSSIA  
QRLKGLGAFVIDSDHLGHRAYAPGGPAYQPVVEAFGTDILHKDGIINRKVLGSRVFGNKKQLKILTDIMWPIIAK  
LAREEMDRAVAEGKRVCVIDAAVLLEAGWQNLVHEVWTAVIPETEAVRRIVERDGLSEAAAQSRLQSQMSGQQLV  
EQSHVVLSTLWEPHITQRQVEKAWALLQKRIPKTHQALD

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**FIGURE 4861**

CCTCGCCGCAAGGGGGCCCGCCCGCTGGCCCGTTTCCGGTCCGGTGGGTACAAGATGACGGAGCCGGGCGCCTCTC  
CCGAGGACCCCTTGGGTCAAGGCAAGCCCCGTGGGCGCGCACGCCGCGAGGGGAGGGCGGGTTCGGGCTCGTGAC  
GTAGGGGGGCGGGAAGACGAGGGGCTTCCCTCCTGTCCCCAAAGTCCCCACGCTCTCCGTGCCCGGGGCTGCA  
GAGAAGACAGCTCTCACCCCGCTGTGCCAAGGTGGAGTATGCCTACAGCGACAACAGCCTGGACCCCGGGCTTT  
TTGTAGAAAGCACCCGCAAGGGGAGTGTAGTGTCCAGAGCTAATAGCATCGGTTCCACCAGTGCCTCTTCTGTCC  
CCAACACAGATGATGAGGACAGTGATTACCACCAGGAGGCCTACAAGGAGTCCACAAAGACCGGCGCGCGCG  
CACACACTCAGGCTGAGCAGAAGAGGAGGGACGCCATCAAGAGAGGCTATGATGACCTTCAGACCATCGTCCCCA  
CTTGCCAGCAGCAGGACTTCTCCATTGGCTCCCCAAAGCTCAGCAAAGCCATCGTTCTACAAAGACCATTGACT  
ACATTTCAGTTTTTGCACAAGGAGAAGAAAAAGCAGGAGGAGGAGGTGTCCACGTTACGCAAGGATGTCACCGCCC  
TAAAGATCATGAAAGTGAACATATGAGCAGATTGTGAAGGCACACCAGGACAACCCCATGAAGGGGAGGACCAGG  
TCTCTGACCAGGTCAAGTTCAACGTGTTTCAAGGCATCATGGATTCCCTGTTCCAGTCCCTCAATGCCTCCATCT  
CAGTGGCCAGCTTCCAGGAGCTGTGACGCTGTGTCTTCAGCTGGATCGAGGAGCACTGTAAAGCCTCAGACCCTGC  
GGGAGATTGTGATTGGCGTCTGACCAATTGAAAAACCAGCTTTACTGACCGGTTCTTGGAACCTGGAGAACA  
GCCAACAAGAGGCCCTTGAATCTCTACGTGGCCACTGAACTGCTGGGCCCGGAGACTGGACTACAAACCTCAC  
ACTGGTCAGCTGGTTTTCTACTTGGTGTTTGGTTTTTCCAGCCCCATTTTATCTTCAGCGGAGCCGCGGTGTTTG  
TTTTGTGAAAGCTTCTGATTAAATTAATTATATTGACGATAAACTCAAACCTACCCAGCCTTCCCCCACTCCAT  
GGAAGTCCCTGGGATGGGCGTCTGCTCTGGACACCCCAAAGAGCTCCTGCCCTCTCAGCCCTTTATTCAAGCCTC  
AGATTTCTGCTCATGATCTACATAGATTTGGAAACTGTTTTCTCTGTTTTTGGTCTCTTGGGCAACATTTTTGGC  
CCAAGTTTGGGCAACATTTGGCCCAAGTTTGGGCATTTTGGCAGTAGCTGTATGGGAGAAAAAGAGTAAGAGGAA  
ATATTTCCACAGCCATGAAGGGTGAAAGGGCACCTTGTGCCTAGACTAGGGCTGCCTGGTCAGTCCAGGTGAGG  
CCAAGGGCTTTCTGGCCATCTCAGGGAGGGGCCACCAGGTTCCCTCCCTCACCCCATATTCCATCACCTTCCTCC  
TCTGCTCTGGGTGGTAAGGGAAGCCCTCCCGGTTCCACAGGCTATGATGCTGCATGGCAGAGGCAGGTATAACA  
CAGCACTACATATTGAAATTTTTTATTTTTCTAAAATACCAATGCAGTTTTGCTACGGTTACAATTTTGAAATAT  
TAACTGAGCCTCAAAATCACCTTTTCTGTCAAGCATATCTTGGCCTCTCCATGTCTCAGTGTGCTGCATTTT  
TCCCAGGACTTGGGGGTGGGGTGAAAAGCGTACAAAAGATACTTAAAAGGGCTCCTGGGGTACACAAGCCCAGCA  
GGTCTCTGAGTGAAGCCGTGGGCCCTCCAAATGCTCGTTTTATAGCAACCTCTCTCTACCCTAGTTCTCCAAATTC  
ACTTCTGCCTTCCTCAGGTTTGATATCTGGCAGGTTTACTATCCAGAGGAAATTAAATATTTTTATATAAAATT  
AAATTATAATAAATATTGCCAAATGCTTTCCTTTAGCATTGTTCCAAGTCTAAATGTTAACCTCAAGCTACTGCA  
ATTTAGACAAATGAAATGGGCTGGGTCTACCCCCAGCCACCAGCCCTCATCCTCTCTACCCAGTGTCTGGTTTTAT  
GCTTGTCTCCTGACTGCTCTGCTTAAAGGTGAAAGTAGCAGGAACAACAACAAAGCCAACCAAAAAACAAGGTAG  
CCAGTGCAAGACATCTCACTCTTCTGACATCCTGCAGTCCCCACCAGTCTGACCGTGGGCCCCCTCAGGGGTCTG  
GGAGTGTGACGTTGTAATCTTCATCCGTCTCTATCCCAACTTCCTCCTGTGAGACAGGGAGACAAGTGAATGAGA  
TGTCACCAGGATAAGACCACAGGGAAGCAAAGAAGGAAGAGAGCTCCACTTACAAAGAACTGCTTCTTGCTCTTG  
GGGTATCCTTCAAGTATTGCATCAGACAGCTCTGTAGCCTGACAAGAAATAAAACCACCCGTTTTTCAGATGGGCA  
GCACTGGGCACTGCCTGTCTAGTTTATGATATTGTGT

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**FIGURE 4862**

MTEPGASPEDFWVKASPVGAHAGEGRAGRARARRGAGRRGASLLSPKSPTLSVPRGCREDSHPACAKVEYAYS  
NSLDPGLFVESTRKGSVVS RANSIGSTSASSVPNTDDESDYHQEAYKESYKDRRRRAHTQAEQKRRAIKRGYD  
DLQTIVPTCQQQDFSIGSQKLSKAIVLQKTIDYIQFLHKEKKKQEEEVSTLRKDVITALKIMKVNYEQIVKAHQDN  
PHEGEDQVSDQVKFNVFQGIMDSLFSFNASISVASFQELSACVFSWIEEHCKPQTLREIVIGVLHQLKNQLY

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**FIGURE 4863**

CAACTACAACGTCCGGCTTTCTGAGTTGGGTGGCGGGAAGGCGATGAGTAAAGGCCGGGCAGAAGCTGCGGTAG  
CCGCCGGGATCCTCCTGAGGTACCTGCAGGAGCAGAACCGGCCCTACAGCTCCCAGGATGTGTTTCGGGAACCTAC  
AGCGGGAACACGGACTGGGCAAGGCGGTGGTGGTGAAGACGCTGGAGCAGCTGGCGCAACAAGGCAAGATCAAAG  
AGAAGATGTACGGCAAGCAGAAGATCTATTTTTCGGATCAGGACCAGTTTGACATGGTGAGTGATGCTGACCTTC  
AAGTCCTAGATGGCAAAATCGTGGCCCTCACTGCTAAGGTGCAGAGCTTGCAGCAGAGCTGCCGCTACATGGAGG  
CTGAGCTCAAGGAATTATCTAGTGCCCTGACCACACCAGAGATGCAGAAAGAAATCCAGGAGTTAAAGAAGGAAT  
GCGCTGGCTACAGAGAGAGATTGAAGAACATTAAAGCAGCTACCAATCATGTGACTCCAGAAGAGAAAGAGCAGG  
TGTACAGAGAGAGGCAGAAGTACTGTAAGGAGTGGAGGAAGAGGAAGAGGATGGCTACAGAGCTGTCTGATGCAA  
TACTTGAAGGATACCCCAAGAGCAAGAAGCAGTTCTTTGAGGAAGTTGGGATAGAGACGGATGAAGATTACAACG  
TCACACTCCCAGACCCCTGAGGGGCCCCACGGTCAGGACTGGTGGGACTGCAGGATGTCAGAAGAGTGAGATGTC  
TTGCACTGGCTACCTTGTTTTTGGTTGGCTTTTTGTGTTGTTCCCTGCTACTTTACCTTTAAGCAGAGCAGTCAG  
GAGACAAGCATAAACCAGAGCACTGGGTAGAGAGGATGAGGGCTGGTGGCTGGGGGTAGACCCAGCCCATTTTCAT  
TGTCTAAATTGCAGTAGCTTGAGGTAAACATTTAGACTTGGAACAATGCTAAAGGAAAGCATTGCGCAATATTTA  
TTATAATTTAATTTTATATAAAAAATATTTAATTTCTCTGGATAGTCAAACCTGCCAGATATCAAACCTGAGGAA  
GGCAGAAGTGAATTTGGAGAACTAGGGTAGAGAGAGGTTGCTATAAAACGAGCATTGAGAGGGCCCCACGGCTTCA  
CTCAGGACCTGCTGGGCTTGTTGTACCCAGGAGCCCTTTTAAGTATCTTTTGTACGCTTTTCACCCACCCCCAA  
GTCCTGGGAGAAATGCAGGCAACACTGAGACATGGGAGAGGCCAAGATATGCTTGACAGAAAGGGTGATTTTGAG  
GCTCAGTTAATATTTCAAATTTGTAACCGTAGCAAACTGCATTGGTATTTAGAAAAATAAAAAATTTCCA

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**FIGURE 4864**

GGGCGGACGGCACAGAGGGAGGGAGCGAGCGAGCAGTGAGTAAGCCAGCAAGGGCGGTTCGGGTCCCGAGGTCAGC  
CGAGATTTCTCAGGTCCCTCCGGCCCCCTCCCTGGAGTCCACAGCGCCTCCGGTGTCAGAGGATCGGACACGGC  
CCGGCCCCGGCCATGGCCTCGTTGCTGAAGGTGGATCAGGAAGTGAAGCTCAAGGTTGATTCTTTAGGGAGCGGA  
TCACAAGTGAGGCGAGAAGACTTGGTGGCAAATTTTTCCCAAAGAAGTTATTAGAAGTTGATAGTTTCTGAAGG  
AACCAATCTTAAACATCCATGACCTAACTCAGATCCACTCTGACATGAATCTCCAGTCCCTGACCCCATTTCTTC  
TCACCAATAGCCATGATGGACTGGATGGTCCCACTTATAAGAAAGCGAAGGTTGGATGAGTGTGAAGAAGCCTTCC  
AAGGAACCAAGGTGTTTGTGATGCCCAATGGGATGCTGAAAAGCAACCAGCAGCTGGTGGACATTATTGAGAAAG  
TGAAACCTGAGATCCGGCTGTTGATTGAGAAATGTAACACGCCCTTCAGGCAAAGGTCCCTCATATATGTTTTGACC  
TCCAGGTCAAAATGTGGGTACAGCTCCTGATTCCCAAGATGGAAGATGGAACAACCTTTGGGGTGTCCATTGAGG  
AGGAAACAGTTGCAGAGCTAAGAAGTGTGAGAGTGAAGCTGCATCTTATCTGGACCAGATTTCTAGATATTATA  
TTACAAGAGCCAAATTGGTTTCTAAATAGCTAAATATCCCATGTGGAGGACTATCGCCGCACCGTGACAGAGA  
TTGATGAGAAAGAATATATCAGCCTTCGGCTCATCATATCAGAGCTGAGGAATCAATATGTCACTCTACATGACA  
TGATCCTGAAAAATATCGAGAAGATCAAACGGCCCCGGAGCAGCAATGCAGAGACTCTGTACTGAGGCCAGGGCC  
AGGGCCAGGGGACTCTGTGAGTCTGGCTCAAGACCGACATTGCCTTGGTTTGTACATGACTATCGTGATGGGGA  
AACTGGCTGGAAATAGTAATCACACCTCTCTGTTTTTAGTTAGAGTCTAATGAACTCTCATCTAGTTCTGTGAT  
GTGTTTACCTCTTTTTTCAGGCCTCAGGAACCTCTTCTATTTCTTCCCTAATACCCACACCCAACTGTGCTAA  
TTTCTGGAGAACTCCAGGTTTGTGTGTGCAGGATGTTGGCACAAAAATACCTGTGTTTTTATTCTCCCCCTCTCT  
CCCTCCTGTGCTTGGCGCTTATGTTTTCTCCGTTTGATAATTAGTTGGTTAAAAGCTGAGGGAACCGGAAGGA  
AAGTGCTAGGIGTTTTTATGAACTAGGGTGGCGGGGGACGAACTTCTCTTCCCTCACATGAGGTTACTGTTTCT  
TTCTCTGTGGGGCATTGGATCCTCCCACAGTTGCCCTGGTGATGACTTAGGGCTTCCCATCTGTGTACATCCCA  
CTTTGAATCTTGATCGTGACAAGAAATACCTTAGGCCTTCAGTCAATTCCGAAGCTCCTTCAGTTGTTTTTATAA  
TGGGCGTTTTTACATGCACATATGTGTATGTCATGTATACGCCCATACAGACATGCACACACAGACTCCTACTCCA  
TTAGCTAACATACCTCCTCTCCACAACCCCTGTACATACCTTTCAGGAGGTGACAGTTGTCTTAGTTGTCTAT  
CTACCCAGACAAACGTCCTGGGCCCGTCTCCCTCCTGATACTGTAGCCTCTTGGTACCCAGGGTGAGTTGGTGG  
AGAACAGAGAGATGAGAAGCAGAGGGCTTGGGGAAAGCCTGTTCTCTCTGACTCAGCCCTTTTTGGCATTATTG  
CAAGAGCTTGACTCCTGGTTGCCTTTTTCCAGCCAGTTTTTCAGTTGGGGTGAAGGTTTCTGCAAGTGTGAGGTCC  
AGATGCTGCTGCTCATGTTGGGCTTTCCTTTTGGGAAGTATTTCTCTTTATTTATAGTGTCGGGCTTCCGGGGAA  
AGCAATCATTGGTGTGTATGTGTATGTGCATGCACACAGTGCATATACACATTGTGTATGTGGAAATGTGCTG  
GGCAAGTCAAAACTATAGAAGAGTTGCCTCCTGTCTCTCGAATCTTCCAGAGATATCACTTAATTGTAAACAGCT  
TTTGTGTTAATCCCTTCAGCCCTAGCTCTTTTATTCTACCACGGCTGGAGAGTTGATACCTGCAGTCAGCCTG  
CCAGTGACTCTTAGTGTCTGTTTCTGACTTATTTTTCTGTCTCTGTCTTCCAACCCCCAATAATATTTCCACCG  
GGGATGCATCATTTTTTACTCCCAATATTCTGTAGAGAGGGAGTCAGGATGCTGTCTTCCACGAATAGTACTCAG  
TAACAAACCAATTGCATTTTAGTTGGGCAGTGTCCACCCACCCTCCAGATCCCTTCCAGCTAAAACCTTCCC  
CCTTCCCTCCATGTGTTTCTCAGTTTCCCGTTTCGTTTGTGGACTGTTCCACTGCCCTCCTCCTCACCTATC  
ACCCATGGATCGTAATGTAAAATTCTTTTACCATGTCAAGAAATTATTAATAATACAGGTACTTTGACCTCTTTC  
TAAAGCCGCAGACCCTGGTGCAATGCTCTGGTGGCTAGGGATGTACTCATGCTCATATGTGTGCACGCTTGGACA  
CCCACCTCCATGGACACCTAGCCACCCTGTTGTGTGCTTATGCCAGTTGAGCTGAATCTTTTCCCAGTATAG  
TGGAAGACTGAGGCTTCTGCCTACTGAGCAAGGTTGGGTGCTTCATTTGTGTTGAGTCTGAATTATGGGAAAGT  
TAGCTCTTCCAGACCTAAGCTGCCTTCTCCTTACTTTTCAG

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**FIGURE 4865**

GCTGAAGACAGAGCGATGGTAGTTCTGGAGGCCTCGCTCCGGGGCCGACCCGAGGCCACAGTGCCTCCGCGGTAG  
ACCGGACTTGGGTGACGGGCTCCGGGCTCCCGAGGTGAAGAGCATCGGGGGCTGAGGGATGGAAGGGTCTAAGAC  
GTCCAACAACAGCACCATGCAGGTGAGCTTCGTGTGCCAGCGCTGCAGCCAGCCCTGAAACTGGACACGAGTTT  
CAAGATCCTGGACCGTGTACCATCCAGGAACCTCACAGCTCCATTACTTACCACAGCCCAGGCGAAACCAGGAGA  
GACCCAGGAGGAAGAGACTAACTCAGGAGAGGAGCCATTTATTGAAACTCCTCGCCAGGATGGTGTCTCTCGCAG  
ATTCATCCCCCAGCCAGGATGATGTCCACAGAAAGTGCCAACAGCTTCACTCTGATTGGGGAGGCATCTGATGG  
CGGCACCATGGAGAACCTCAGCCGAAGACTGAAGGTCACTGGGGACCTTTTTGACATCATGTCCGGCCAGACAGA  
TGTGGATCACCCACTCTGTGAGGAATGCACAGATACTCTTTAGACCAGCTGGACACTCAGCTCAACGCTCACTGA  
AAATGAGTGTGAGAACTACAAACGCTGTTTGGAGATCTTAGAGCAAATGAATGAGGATGACAGTGAACAGTTACA  
GATGGAGCTAAAGGAGCTGGCACTAGAGGAGGAGAGGCTGATCCAGGAGCTGGAAGACGTGGAAAAGAACCGCAA  
GATAGTGGCAGAAAATCTCGAGAAGGTCCAGGCTGAGGCTGAGAGACTGGATCAGGAGGAAGCTCAGTATCAGAG  
AGAATACAGTGAATTTAAACGACAGCAGCTGGAGCTGGATGATGAGCTGAAGAGTGTGAAAACAGATGCGTTA  
TGCCACAGCGCAGCTGGATAAGCTGAAGAAAACCAACGCTTTTAATGCAACCTTCCACATCTGGCACAGTGGACA  
GTTTGGCACAATCAATAACTTCAGGCTGGGTGCGCTGCCAGTGTTCCCGTGAATGGAATGAGATTAATGCTGC  
TTGGGGCCAGACTGTGTTGCTGCTCCATGCTCTGGCCAATAAGATGGGTCTGAAATTTAGAGATACCGACTTGT  
TCCTTACGGAAACCATTATATCTGGAGTCTCTGACAGACAAATCTAAGGAGCTGCCGTTATACTGTTCTGGGGG  
GTTGCGGTTTTTCTGGGACAACAAGTTTGACCATGCAATGGTGGCTTTCCCTGGACTGTGTGCAGCAGTTCAAAGA  
AGAGGTTGAGAAAGGCGAGACACGTTTTTGTCTTCCCTACAGGATGGATGTGGAGAAAGGCAAGATTGAAGACAC  
AGGAGGCAGTGGCGGCTCCTATTCCATCAAAACCCAGTTAACTCTGAGGAGCAGTGGACAAAAGCTCTCAAGTT  
CATGCTGACGAATCTTAAGTGGGGTCTTGCTTGGGTGTCTTCAACAATTTTATAACAAATGACTTTTTTCTTAGG  
GGGAGGTTTGCTTAAAGGCTTTTAAATTTGTTTTGTTTGCAAACATGTTTTAAATTAAATTCGGGTAATATTAA  
ACAGTACATGTTTACAATAACAAAAAGAAAAATCCACAAAAGCCACTTTATTTTAAATATCATGTGACAGAT  
ACTTTCAGAGCTACAACATGCCATCTATAGTTGCCAGCCCTGGTCAGTTTTGATTCTTAACCCCATGGACTCCT  
TTCCCTTTCTTCTCTGAAAAAACTAATTTAAATTTGCTTTTCTTTTTTTAACTGAGTTGAATTGAGATTGATG  
TGTTTTCACTGGATTTTTATCTCTCTCAACTTCCTGCACTTAACAATATGAAATAGAACTTTTGTCTTTACTGA  
GATGAGGATATGTTTGAAGATGCACAGTTGGATAATGTGGGAAAATGACATCTAAGCTTTACCTGGTCACCATGTG  
ATGTGATCAGATGCTTGAAATTTAACACTTTTCACTTGGTTCTTATACTGAATGCCGACTCTGCTCTGTGTTAGA  
GATATGAAATGGTGTGTTGATACTGTTTGAGACATTATGGAGAGATTTAATTATTTGTAATAAAAGATTGTGCA  
GTCTGAAACTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4866**

MEGSKTSNNSTMQVSFVCQRCSQPLKLDTSFKILDRVTIQELTAPLLTTAQAKPGETQEEETNSGEEFFIETPRO  
DGVSRRFIPPARMMSTESANSFTLIGEASDGGTMENLSRRLKVTGDLFDIMSGQTDVDHPLCEECDTLLDQLDT  
QLNVTENECQNYKRCLEILEQMNEDDSEQLQMELEKALALEEERLIQELEDVEKNRKIVAENLEKVQAEAERLDQE  
EAQYQREYSEFKRQQLDDELKSVENQMRYAQTQLDKLKTNVFNATFHIWHSQGFGTINNFRGLRPSVPVEW  
NEINAAWGQTVLLLHALANKMGLKFQRYRLVPYGNHSYLESITDKSKELPLYCSGGLRFFWDNKFHAMVAFLDC  
VQOFKEEVEKGETRFCLPYRMDVEKGKIEDTGGSGGSYSIKTQFNSEEQWTKALKFMLTNLKWGLAWVSSQFYNK



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**FIGURE 4867**

TTGGAGGTCCCCCTCCCCACTAAGTGCCTCTTTGCATAGCACCAGTCCCCACCCGCACGCTCTCTGGACCACTAC  
AGCTGGACGGGCAATGGCGGGTCGGGGAGGCGCAGCAGACCCAATGGACCAGCTGCTGGGAACAAGATCTGTCA  
ATTTAAGCTGGTTCTGCTGGGGGAGTCTGCGGTAGGCAAATCCAGCCTCGTCTCCGCTTTGTCAAGGGACAGTT  
TCACGAGTACCAGGAGAGCACAATTGGAGCGGCCCTTCTCACACAGACTGTCTGCCTGGATGACACAACAGTCAA  
GTTTGAGATCTGGGACACAGCTGGACAGGAGCGGTATCACAGCCTGGCCCCATGTACTATCGGGGGGGCCAGGC  
TGCCATCGTGGTCTATGACATCACCAACACAGATACATTTGCACGGGCCAAGAAGTGGGTGAAGGAGCTACAGAG  
GCAGGCCAGCCCCAACATCGTCATTGCACTCGCGGGTAACAAGGCAGACCTGGCCAGCAAGAGAGCCGTGGAATT  
CCAGGAAGCACAAAGCCTATGCAGACGACAACAGTTTGCTGTTTCATGGAGACATCAGCAAAGACTGCAATGAACGT  
GAACGAAATCTTCATGGCAATAGCTAAGAAGCTTCCCAAGAACGAGCCCCAGAATGCAACTGGTGCTCCAGGCCG  
AAACCGAGGTGTGGACCTCCAGGAGAAACAACCCAGCCAGCCGGAGCCAGTGCTGCAGCAACTGAGCCCCCTTGC  
CTGCCCCGCTGCCCCCGCTCCTCCGCTGAATGACCCGACTGGAATCCACTCTAACCAATCGCACTTAACGACTC  
GGGCCACCACTGGGGGGGAGGGGGAGGGGTCCACCATGATTTCTCCATATAATTTTGATCATAGGCCGGAGTGA  
GTCATTCCACCTGCACCTTTCTGTACAAATACTAATTCAATTTTAAGTCTTAAGTCACTTTTTTAATATATATGA  
TCTTCTGCTCTTCCCACCTTCCCTCCCTTTCTACTGCTCTCCCATTTTCCCTTGCTGGGAGTAGCCACATGCTCTT  
GCCCCCAACCTTGTATATGGGGACAGTGGGGTCAGTGCAGCTACCCTTTCTTTCCCTCCTGCGGAACAGCGGA  
CCCAGCAAGAGCATCCACATCCTCACTTTGTTCCGAGTGGTCTTTGGTTTGGGCGGTGGGGCAGACCTTGGGAAG  
GGGCTTAGGAAGGGAGAGGCAGCTCTTCCCTCAGCTGGCTCTCATCAGGCTGCAGCCCCCTCCCGCTCCACCT  
CCCTGCTGGGAAACCACAGCATTATCACAGCATTATTGTGACAGCCACGAACCCATTGCCACAACCCCTCCACC  
CTCGGTACCCCCAACCTCTGGCTCTGAGCCCTGTTCTGACCAAATCATGATGATGAGTATTTGGGGTGGGTGGG  
TAAGGGGGGAGTGGGAGGGGACGGAACCAACTTTTTCTGTATTTTGTATTGTATGTTTCTTCAACATGTAACC  
AATCAGTATCTTGTCAATATAGTCAGCCGATCGATCGACCTC

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**FIGURE 4868**

MAGRGGGAARPNGPAAGNKICQFKLVLLGESAVGKSSLVLRVKGQFHEYQESTIGAAFLITQTVCLDDTTVKFEIW  
DTAGQERYHSLAPMYRGAQAIVVYDITNIDTFARAKNWKELQROASPNIVIALAGNKADLASKRAVEFQEAQ  
AYADDNSLLFMETSAKTAMNVNEIFMAIAKKLPKNPQNATGAPGRNRGVDLQENNPASRSQCCSN

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**FIGURE 4869**

CCGCTCTCCGCTGCGGGGGAGGCCATGGCGGAACCTTCCCAGGCCCCGACCCCGGCCCCGGCTGCGCAGCCCCGG  
CCCCCTCAGTCCCCAGCCCCCTGCCCCAACTCCGACTCCTGCACCCAGCCCGGCTTCAGCCCCGATTCCGACTCCC  
ACCCCGGCACCCAGCCCCCTGCCCCAGCTGCAGCCCCAGCCGGCAGCACAGGGACTGGGGGGCCCCGGGTAGGAAGT  
GGGGGGGCCGGGAGCGGGGGGATCCGGCTCGACCTGGCCTGAGCCAGCAGCAGCGGCCAGTCAGAGGAAGGCG  
CAAGTCCGGGGGCTGCGCGCGCCAAGAAGCTTGAGAAGCTAGGGGTCTTCTCGGCTTGCAAGGCCAATGAAACC  
TGTAAGTGTAATGGCTGGA AAAAACCCCAAGCCCCCACTGCACCCCGCATGGATCTGCAGCAGCCAGCTGCCAAC  
CTGAGTGAGCTGTGCCGAGTTGTGAGCACCCCTTGGCTGACCACGIATCCCACTTGGAGAATGTGTGAGAGGAT  
GAGATAAACCCGACTGCTGGGGATGGTGGTGGATGTGGAGAATCTCTTCATGTCTGTTTACAAGGAAGAGGACACA  
GACACCAAGCAGGTCTATTTCTACCTCTTCAAGCTACTGCGGAAATGCATCCTGCAGATGACCCGGCCTGTGGTG  
GAGGGGTCCCTGGGCAGCCCTCCATTTGAGAAACCTAATATTGAGCAGGGTGTGCTGAACTTTGTGCACTACAAG  
TTTAGTCACTTGGCTCCCCGGGAGCGGCAGACGATGTTTCAGGCTCTCAAAGATGTTCTTGCTCTGCCTTAACCTAC  
TGGAAGCTTGAGACACCTGCCAGTTTCGGCAGAGGTCTCAGGCTGAGGACGTGGCTACCTACAAGGTCAATTAC  
ACCAGATGGCTCTGTTACTGCCACGTGCCCCAGAGCTGTGATAGCCTCCCCCGCTACGAAACCCTCATGTCTTT  
GGGCGAAGCCTTCTCCGGTCCATTTTCACCGTTACCCGCGCGCAGCTGCTGGAAAAGTTCCGAGTGGAGAAGGAC  
AAATTGGTGCCCCGAGAAGAGGACCCCTCATCTCACTCACTTCCCCAAATTCTGTCCATGCTGGAGGAGGAGATC  
TATGGGGCAAACCTCTCAATCTGGGAGTCAGGCTTACCATGCCACCCTCAGAGGGGACACAGCTGGTTCCCCGG  
CCAGCTTCAGTCAGTGCAGCGGTTGTTCCAGCACCCCCATCTTCAGCCCCAGCATGGGTGGGGGCAGCAACAGC  
TCCCTGAGTCTGGATTCTGCAGGGGCCGAGCCTATGCCAGGCGAGAAGAGGACGCTCCAGAGAACCTGACCCCTG  
GAGGATGCCAAGCGGCTCCGTGTGATGGGTGACATCCCATGGAGCTGGTCAATGAGGTCACTGTGACCATCACT  
GACCCTGTGCCATGCTGGGGCTGAGACGAGCCTGCTTTCGGCCAATGCGGCCCGGGATGAGACAGCCCGCCTG  
GAGGAGCGCCGCGGCATCATCGAGTTCCATGTCTATCGGCAACTCACTGACGCCCCAAGGCCAACCGCGGGTGTG  
CTGTGGCTCGTGGGGCTGCAGAAATGTCTTTTCCACCAGCTGCCGCGCATGCCCTAAGGAGTATATCGCCCGCTC  
GTCTTTGACCCGAAGCACAAGACTCTGGCCTTGATCAAGGATGGGCGGGTCATCGGTGGCATCTGCTTCCGCATG  
TTTCCACCAGGGCTTACGGAGA TTGTCTTCTGTGCTGTACCTCGAATGAGCAGGTCAAGGGTTATGGGACC  
CACCTGATGAACCACCTGAAGGAGTATCACATCAAGCACAACATTCTCTACTTCTCACCTACGCCGACGAGTAC  
GCCATCGGCTACTTCAAAAAGCAGGGTTTCTCCAAGGACATCAAGGTGCCAAGAGCCGCTACCTGGGCTACATC  
AAGGACTACGAGGGAGCGACGCTGATGGAGTGTGAGCTGAATCCCCGCATCCCCTACACGGAGCTGTCCCACATC  
ATCAAGAAGCAGAAAGAGATCATCAAGAAGCTGATTGAGCGCAACAGGCCAGATCCGCAAGGTCTACCCGGGG  
CTCAGCTGCTTCAAGGAGGGCGTGAGGCAGATCCCTGTGGAGAGCGTTCTTGGCATTGAGAGACAGGCTGGAAG  
CCATTGGGGAAGGAGAAGGGGAAGGAGCTGAAGGACCCGACCAGCTCTACACAACCCTCAAAAACCTGCTGGCC  
CAAATCAAGTCTCACCCAGTGCCTGGCCCTTCATGGAGCCTGTGAAGAAGTCGGAGGCCCCCTGACTACTACGAG  
GTCATCCGCTTCCCCATTGACCTGAAGACCATGACTGAGCGGCTGCGAAGCCGCTACTACGTGACCCGGAAGCTC  
TTTGTGGCCGACCTGCAGCGGGTCATCGCCAACGTGCGGAGTACAACCCCCCGACAGCGAGTACTGCCGCTGT  
GCCAGCGCCCTGGAGAAGTTCTTCTACTTCAAGCTCAAGGAGGGAGGCCTCATTGACAAGTAGGCCCATCTTTGG  
GCCGACGCCCTGACCTGGAATGTCTCCACCTCGGATTCTGATCTGATCTTAGGGGGTGCCTTGCCCCACGGAC  
CCGACTCAGCTTGAGACACTCCAGCCAAGGTCTCCGGACCCGATCCTGCAGCTCTTCTGGACCTTCAGGCAC  
CCCCAAGCGTGACGCTCTGTCCAGCCTTCACTGTGTGAGAGGTCTCCTGGGTGGGGCCAGCCCTCTAGA  
GTAGCTGGTGGCCAGGGATGAACCTTGCCAGCCGTGGTGGCCCCAGGCCTGGTCCCCAAGAGCTTTGGAGGCT  
TGGATTCTGGGCCTGGCCAGGTGGCTGTTTCCCTGAGGACCAGAAGTCTCATTTTAGCTTGAGTGATGGCTT  
CAGGGGTGGAAGTTAGCCCAAAGTGAAGGGGGCCATGCCTTGTCCAGCACTGTTCTGTGAGTCTCCCCAGGG  
GTGGGGGGTATGGGGACCATTCAATCCCTGGCATTAAATCCCTTAGAGGGAATAATAAGCTTTTTATTCTCTG

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**FIGURE 4870**

MAEPSQAPTPAPAAQPRPLQSPAPAPTPTPAPSPASAPIPTPTPAPAPAPAAAPAGSTGTGGPGVGSGGAGSGGD  
PARPGLSQQRASQRKAQVRGLPRAKKEKLGVSACKANETCKCNGWKNPKPPTAPRMDLQQPAANLSELCRSC  
EHPLADHVSHLENVSEDEINRLLGMVVDVENLFMSVHKEEDTDTKQVYFYLFKLLRKCILQMTRPVEGSLGSP  
FEKPNIEQGVLNFBVQYKFSLAPRERQTMFELSKMFLCLNYWKLETPAQFRQSQAEADVATYKVNYTRWLCYCH  
VPQSCDSLPRYETTHVFGRLRSIFTVTRRQLLEKFRVEKDKLVPEKRTLILTHFPKFLSMLEEEIYGANSPIW  
ESGFTMPPEGTQLVPRPASVSAAVVPSTPIFSPSMGGGSNSLSLDSAGAEMPGEKRTLPELNTLEDARLRV  
MGDIPMELVNEVMLTITDPAAMLGPETSLLSANAARDETARLEERRGIIIEFHVIGNSLTPKANRRVLLWLVLQ  
VFSHQLPRMPKEYIARLVFDPKHKTALIKDGRVIGGICFRMEPTQGFTEIVFCAVTSNEQVKGYGTHLMNHLKE  
YHIKHNIYFLTYADEYAIGYFKKQGFSDIKVPKSRYLGYIKDYEGATLMECELNPRIPYTELSHIKKQKEII  
KKLIERKQAQIRKVYPGLSCFKEGVRQIPVESVPGIRETGWKPLGKEKGKELKDPDQLYTTLKNLLAQIKSHPSA  
WPFMEPVKKSEAPDYEVIRFPIDLKTMTERLRSRYVTRKLFVADLQRVIANCREYNPPDSEYCRCASALEKFF  
YFKLKEGGLIDK

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**FIGURE 4871**

GGCACGAGGCGCGAGCTCGGAGGGCCCGGCTGGTGCTGCGGGGGCCCCGGGAGGTTGAAAAC TAAGCATGGGGAA  
GAGCTGCAAGGTGGTCGTGTGTGGCCAGGCGTCTGTGGGCAAACTTCAATCCTGGAGCAGCTTCTGTATGGGAA  
CCATGTAGTGGGTTTCGGAGATGATCGAGACGCAGGAGGACATCTACGTGGGCTCCATTGAGACAGACCGGGGGT  
GCGAGAGCAGGTGCGTTTTCTATGACACCCGGGGGCTCCGAGATGGGGCCGAAGTGCCCCGACACTGCTTCTCTTG  
CACTGATGGCTACGTCTGTCTATAGCACAGATAGCAGAGAGTCTTTTCAGCGTGTGGAGCTGCTCAAGAAGGA  
GATTGACAAATCCAAGGACAAGAAGGAGGTACCATCGTGGTCTTGGCAACAAGTGTGACTTACAGGAGCAGCG  
GCGTGTAGACCCAGATGTGGCTCAGCACTGGGCCAAGTCAGAGAAGGTGAAGCTGTGGGAGGTGTAGTGGCGGA  
CCGGCGCTCCCTCCTGGAGCCCTTTGTCTACTTGGCCAGCAAGATGACGCAACCCAGAGCAAGTCTGCCTTCCC  
CCTCAGCCGGAAGAACAAGGGCAGCGGCTCCTTGGATGGCTGAAGAGCTGCCGTTCTCTTTACGATCCCAGCC  
CCATTTTCAGTGTCTGGGGCTCTGGTAGATGTGTTGAGGGCAAAGTAGAGGACAAGCTGTCTTTCCAGTCAGCCA  
GGGAGCTCCCCGCCAGGCCACGCCCCAGCCACTTTGCTCCCTCTCACCTCTGGGAAGTGCAAATACTCTTGGTTG  
ACATCCCCTTCTCAGCCCTCCCAGCCTACTCCCCATCCCAGCTTTTAGAGGATCTGCTCCACTGTCTCCTGGGG  
CAGTTGTGGGTCACTGTCCCTTCCAGCTGCCCCAGACAGGAAGCAGAGTCACCACGCAGCAGTGTCCCTTCTTGG  
GTCTGAGTTCTATTATAGGTAGGGGCCCCACCTCTGGGCTTCCCATCAGCGACACACACACTTATGGCACC  
AGCCTGGACTCCAGAAAAAGGGTGTCCAGGTATTGTGTGTATGCATTTAGTTGTGCACACACAAATATGCTCCTA  
TACTGGCATTAGGCGTCTCCTCATCCCTCACCTGACCTTTCTCCTGTCCTTTTCTTGGCTGGAAGAAGTTGGCC  
TCCTGGGAGTGTAGTTTTCTGTTTTAAATCCCCACCCCTGGCTGGGCTCAGTGGCTCACCCCTGTAATCCCAGC  
ACTTTGGGAGGCCAAGGCGGGTCGATTACTTGAGGTGAGGAGTTCACGACCAGCCTGGCCAACATTGTGAAACCC  
CATCTCTGCCAAAAATACAAAAGTTAGCCGGGCGTAGTGGCACATGCCTGTAATCCCAGCTACCCGGGGAGGCTG  
AGGCAGGAGAATTGCTTGAAGTCTAGAAGGCGGAGGCTGCAGTGAGCCGAGATCGTGCCACTGCACTCCAGCCTGG  
TCAACAGAGCAAGACTCCATCTCGAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4872**

MGKSCKVVVCGQASVGKTSILEQLLYGNHVVGSEMIETQEDIYVGSJETDRGVREQVRFYDTRGLRDGAELPRHC  
FSC TDGYVLVYSTDSRESFORVELLKKEIDKSKDKKEVTIVVLGNKCDLQEQRVDPDVAQHWAKSEKVKLWEVS  
VADRRSLLEPFVYLASKMTQPQSKSAFPLSRKNKGSGSLDG

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**FIGURE 4873**

GGGAAGATGGCGGCTGTCTGAAGCGGCTGCAGAGCCGGTAACGGTGGTGGCGGCTGTTGGGCCAAAGGCGAAAGAC  
GAAGAGGAGGAGGAAGAGGAGCCGCTGCCACCGTGCAGAGCGGTGCGCTGGGCCCCAGTGGGGGCGGTGGCGGAG  
GCCCCGGCCTGGGGCAACCGCGTTTTTAGAAGAGGCGACGGCCAGGAGCCTGGCGCGGCCCGGGCTCCCCCGCG  
GATTGCGCGGGCGGACGCTGCGGCGGCTGCGGGCAGAGCGGCGCGGCTGGACTCGGCGCTGCTGGCGCTGTCC  
TCGCACCTTCGCGCAGGTGCAGTTCCGCCTGCGCCAGGTGGTGC GCGGGGCGCCGGCGGAGCAGCAGCGCTTCTG  
CGGGAGCTCGAAGACTTCGCCTTCCGCGGCTGCCCTCACGTCTAGGTTACGAAGGGCCCCGGCAGCCCCGCCAGC  
GATGAGGGCGATGGGCTGCCAGGGGACCGGCCATGTTGCGGGGCGAGGACCAGAGTGAGCAGGAAAAGCAAGAG  
CGTCTGGAACCCAAAGGGAGAAGCAGAAAGAACTGATACTGCAGCTCAAGACCCAGCTAGATGACCTGGAACG  
TTTGCCTATCAAGAGGGCAGTTATGACTCGCTGCCACAGTCCGTGGTGTGGAAAGACAGCGGGTGATCATAGAT  
GAGTTAATAAGAACTGGACATGAATCTGAATGAGGACATCAGTTCCCTGTCCACTGAAGAGCTTCGTACGCGT  
GTAGATGCAGCAGTGGCTCAGATCGTCAACCCAGCCGAGTCAAAGAACAGTTGGTTGAGCAACTGAAACTCAG  
ATCCGAGACCTTGAGATGTTTATCAACTTCATCCAAGATGAAGTGGGAAGCCCCCTTGACAGCAGGTGGTGGACAC  
TGTGAGTGCAAGGCCGGTGGGAAGACAGGAAATGGCTGCAGCAGAACAGGCAGCAGCAGAACGCCTCCAGGAAAC  
AGCAAAACAAAGGCAGAGGATGTGAAGAAAGTCCGGGAGACGGGGCTGCACCTGATGCGGCGAGCGCTGGCCGTG  
CTCCAGATCTTTGCTGTTAGCCAGTTTGGTTGTGCCACAGGCCAGATCCCTCCAACCTGTGGCAGAGGGTCCAG  
GCTGACAGAGACTACTCTCCCTTGTGTAAGAGGCTGGAGGTGTGAGTGGACAGAGTGAAGCAGCTAGCCTTGAGG  
CAGCAGCCACATGACCATGTCTACCTCTGCCAACCTCCAGGACCTCTCTCTGGGAGGCAAGGATGAGCTGACT  
ATGGCTGTGCGGAAGGAGCTAACGGTGGCTGTGAGGGACCTGCTGGCCCATGGACTGTATGCCTCCTCCCCAGGG  
ATGAGCCTTGTTATGGCTCCTATTGCTTGTGTTGCTGCCAGCCTTCTCCTCGGCCCCAGAGGCCATGCACCCGTGG  
GAGCTCTTTGTAAAGTACTACCATGCTAAGAACGGCCGTGCTTATGTGGAATCCCCAGCCCCGGAAGCTCTCCCAG  
TCCTTCGCCCTTCCTGTTACGGGAGGCACTGTTGTACCCCCAAACAGAGCCTACTGACAGCCATCCACATGGTG  
CTGACAGAGCATGACCCTTTTAAGCGCAGTGCAGACTCAGAATTGAAGGCCTTGGTGTGCATGGCACTGAATGAG  
CAGCGTCTGGTGTCTGGGTGAACCTCATCTGCAAGTCCGGGTCACTCATCGAGCCTCACTACCAGCCCTGGAGC  
TACATGGCACACACAGGCTTTGAGAGTGCCCTCAACCTGCTCAGTCGCCTCAGCAGCCTCAAGTTTAGCCTCCCT  
GTAGATCTGGCTGTGCGCCAGCTCAAAAACATCAAAGATGCCTTTTCATGAGAGTGCCCTAACCCCAAGCAAGCT  
CCTTGTTTCAGTAGGGATAGATGTGCTAGTCTTCTAGCATAGGAGCAAGGAATCAGAGGTGGGGTTAAAGGCATTT  
TTCCAGACCCTGCTCAGGCAGTCGGCCAAATGAGTGCAAAGTCTGTTTTCCCAACCACTTAGCTCTCGGAAAG  
ATGTGCTGGAGGGACCTCTTGTTAAGAAGGTTCTGCCAGGCCGGGCGCGGTGGCTCACACCTGTAATCCCAGCA  
CTTTGGGAGGCCGAGGCGGGCGGATCACAAGGTCAGGAGTTCGAGACCATCCTGTCTAACACGGTGAAACCCCAT  
CTCTACTAAAAATACAAAAAATTAGTCGGACATGGTGGCAGGCACCTGTAGTCCCAGCTACTCGGGAGGCTGAG  
GCAGGAGAATGGCGTGAACCCAGGAGGCGGAGCTTGCAGTGAGCCAAGATCGCGCCACTGCACTCCAGCCTGGGC  
GACAGAGTGAGACTCCGTCTC

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**FIGURE 4874**

MAAVEAAAEPVTVVAAVGP KAKDEEEEEEEF LPPCEAVRWAPVGAVAEARPGATAFLEEATAEEP GAAPGSPD S  
PGRTLRRRLRAERRRLDSALLALSSHFAQVQFRLRQVVRGAPAEQQRLLRELEDFAFRGCPHVLGYEGPGDPASDE  
GDGLPGDRPWLRGEDQSEQEKQERLETQREKQKELILQLKTQLDDLET FayQEGSYDSL PQSVVLERQ RVIIDEL  
IKKLD MNLNEDISSLSTEELRQRVDAAVAQIVNPARVKEQLVEQLKTQIRDLEMFINFIQDEVGSPLQTGGGHCE  
CKAGGKTGNGCSRTGSSRTPPGNSKTKAEDVKKVRETGLHLMRRALAVLQIFAVSQFGCATGQIPPTLWQRVQAD  
RDYSP L LKRLEVSVDRVKQLALRQOPHDHVITSANLQDLSLGGKDELTMAVRKELTVAVRDLLAHGLYASSPGMS  
LVMAPIACLLPAFSSAPEAMHPWELFVKYYHAKNGRAYVESPAKLSQS FALPVTGGTVVTPKQSLLTAIH MVLT  
EHD PFKRSADSELKALVCMALNEQRLVSWNLICKSGSLIEPHYQPWSYMAHTGFESALNLLSRLSSLKFSLPVD  
LAVRQLKNIKDAF



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**FIGURE 4875**

CTTCCCCAGCTGTGCACTCTCCATCCAGCTGTGCGCTCTCGTCGGGAGTCCCAGCCATGTCGACGAGAGAGAGG  
TAGCCGAGGCAGCGACCGGGGAAGACGCCTCTTCGCCGCTCCGAAAACCGAGGCAGCGAGCGACCCCCAGCATC  
CCGCGGCCCTCCGAAGGGGCCGCCGCCGCCGCTCGCCGCCACTGCTGCGCTGCCTAGTGCTCACC GGCTTTG  
GAGGCTACGACAAGGTGAAGCTGCAGAGCCGGCCGGCAGCGCCCCCGGCCCTGGGCCGGCCAGCTGACGCTGC  
GTCTGCGGGCCTGCGGGCTCAACTTCGCAGACCTCATGGCTAGGCAGGGGCTGTACGACCGTCTCCCGCTCTGC  
CTGTCACTCCGGGCATGGAGGGCGCGGGTGTGTGATCGCAGTGGGCGAGGGAGTCAGCGACCGCAAGGCAGGAG  
ACCGGGTGATGGTGTGAACCGGTCAGGGATGTGGCAGGAAGAGGTGACTGTGCCCTCGGTCCAGACCTTCTCTGA  
TTCCTGAGGCCATGACCTTTGAGGAAGCTGCTGCCTTGTCTCGTCAATTACATTACAGCCTACATGGTCTCTTTG  
ACTTCGGCAACCTACAGCCTGGCCACAGCGTCTTGGTACACATGGCTGCAGGGGGTGTGGGTATGGCTGCCGTGC  
AGCTGTGCCGTACAGTGGAGAATGTGACAGTGTTCGGAACGGCCTCGGCCAGCAAGCAGGAGGCACTGAAGGAGA  
ATGGGGTCACACATCCCATCGACTATCACACGACTGACTACGTGGATGAGATCAAGAAGATTTCCCTAAAGGAG  
TGGACATTGTGATGGACCTCTGGGTGGGTGAGATACTGCCAAGGGCTACAACCTCCTGAAACCCATGGGCAAG  
TCGTACCTATGGAATGGCCAACCTGCTGACGGGGCCCCAAACGGAACTGATGGCCCTGGCCCGGACATGGTGGA  
ATCAGTTACAGCGTGACAGCTCTGCAGCTGCTGCAGGCCAACCGGGCTGTGTGTGGCTTCCACCTGGGCTACCTGG  
ATGGTGAGGTGGAGCTGGTCAGTGGTGTGGTGGCCCGCTCTGGCTCTGTACAACAGGGGCCACATCAAGCCCC  
ACATTGACTCAGTCTGGCCCTTCGAGAAGGTGGCTGATGCCATGAAACAGATGCAGGAGAAGAAGAATGTGGCA  
AGGTCTCTCGTTCCAGGGCCAGAGAAGGAGAACTAGGGCAAGTGGCTGTGAGACCCTAGAGACCAGCGAAGGG  
AGAAGTTGGGAAGCTACGTTCTGTGGCCACCAGACTTGCATTTACGCCTCTGTCTATAATGCTCTGCCCTCCCTC  
CCCCGAAGTTCTCTGTGGTGTGACCGCTCTCCCTGCCCTCCCCGCTTCTTGACCTCTGAAGAGGTTGGGAAG  
TGACCATTGGATGTCTGGGCCCTGCCAAGGCGACAGGGAGGGTCAGAGGGAGGCCGGCTGCTTCTGCCCCAC  
CCTTTCCCGGGCCTGCTGTGCTGCTTTGTGCCAAGGTTAGCCAGTCCCCCTGTTGTGTTCATGTGCTTTCA  
CCTCTGCCTCATCTTTCTCCCTGCCCTGCCCGCCACCTCCCCAAGAATTGAAACGTCAGCTCAGGATATGGG  
GCCAATCTCTGTGAGTCCAGCATGTACCTGTCTCTCCCTAGTGTCCCTCAGCCTGGGCTGACCAAGTCCCGCT  
CTGGGCTTGACCAGTTCCCAATCTCGTCCTCTGTCCCAACTTCTTAAGCACAATTGGGCTTCTTCCATCTCCAG  
GTTTTCTGCCATTCTTAACCAAGGCTGCCTCTTCCAACAGGGCGGGAATCAGACCTACTCCCTAGGTCACAACT  
CTGGGAAGGATACAGAGCCCCACCTTCACTGAGTCTCTGGATTGTCTCAGTGCCTTAGCAACGAAAACCT  
GTGCTTGTGTGTGTGGCGGGGAGGGAGGATCTGTTTCCACCTCCTTCTCCTCCCTGTACTCCCCAGT  
GCCTTCTTGTCTGGTGGAGCTGGGGTTTCTCTCTCCCTCCCACTGCCAAAAATCTGTGTATGTG  
CCATTGGGTGGGCGAGCCCCAAGCTCCTGGGGAGGCAGGGCAAAAACAGGTGCCCTCATCGTGGTCTGTGCCAT  
GTCCCGTCTCTATGGTGGTTGAGGAGAAAGCGGGGAAGCTTCTCAGCCTTGACAGATATGTGTGGCATTACTA  
GCCAGAGCTCTGAAAGGCAGTGTGTCTGTTTCTGTACTGGGACCAAAGTAAAAATCCAAGCACATTCCCTTG  
CAGTTAGGGGAGGCCCTACTGCCTTCTCAAAGCAGAGAGGCAGCTTATCAAACCTAGCCCAAACTCTGTTTACA  
TGGGTGGGGAGATGGAGCAGGGAAGTACAGAGTGGGATGGTCAGGACCTGGGCCATTGCAACCAAAATGGGGACT  
TCTTGGGTAGGGAGGTCACTCCCTTCTACTCACTGAGCTAGGATTAGGGAGGGTTATTGCCCCAACCATTGCAATG  
GGAGGTGGAGGGACAGGCTCAGCCTCCTCATTGTCTAAATGAGGCCTAAATGTGTGAAGTGCATTTCTGCTTTT  
GTGTACCCACCACCCCAATTACCACAGCTGCCTTTGTGTGTTTGTGTCAATAAAAAGCCAAACCTGGGAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4876**

MSDEREVAEAATGEDASSPPPKTEAASDPQHFAASEGAAAAAASP LLRCLVLTGFGGYDKVKLQSRPAAPPAPG  
PGQLTLRLRACGLNFADLMARQGLYDRLPPLPVTTPGMEGAGVVI AVGEGVSDRKAGDRVMVLNRSGMWQEEVTVP  
SVQTFLLIPEAMTFEEAAALLVNYITAYMVLDFDGNLQPGHSLVHMAAGGVGMAAVQLCRTVENVTVFGTASASK  
HEALKENGVTHTPIDYHTTDYVDEIKKISP KGV DIVMDPLGGSDTAKGYNLLKPMGKVVTYGMANLLTGPKRNLMA  
LARTWWNQFSVTALQLLQANRAVCGFHLGYLDGEVELVSGVVARLLALYNQGH IKPHIDSVWPF EKVADAMKQMQ  
EKKNVGKVLLVPGPEKEN

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**FIGURE 4877**

ATGGAGGGGCAGAGCGGCCGCTGCAAGATCGTGGTGGTGGGAGACGCAGAGTGCGGCAAGACGGCGCTGCTGCAG  
GTGTTGCGCAAGGACGCCTATCCCGGGAGTTATGTCCCCACCGTGTTTGAGAACTACACTGCGAGCTTTGAGATC  
GACAAGCGCCGCAATTGAGCTCAACATGTGGGACACTTCAGGTTCCCTCTTACTATGATAATGTCCGGCCTCTGGCC  
TATCCTGATTCTGATGCTGTGCTCATCTGCTTCGACATTAGCCGACCAGAAACACTGGACAGTGTTCTCAAGAAG  
TGGCAAGGAGAGACTCAAGAGTTCTGCCCCAATGCCAAGGTTGTGCTGGTTGGCTGTAAACTGGACATGCGGACT  
GACCTGGCCACACTGAGGGAGCTGTCCAAGCAGAGGCTTATCCCTGTTACACATGAGCAGGGCACTGTGCTGGCC  
AAGCAGGTGGGGGCTGTGTCTATGTTGAGTGCTCCTCCCGTCCCTCTGAGCGCAGCGTCAGGGATGTCTTCCAT  
GTGGCTACAGTGGCCTCCCTTGCCCGTGGCCATAGGCAGCTGCGCCGAACTGACTCACGCCGGGGAATGCAGCGA  
TCCGCTCAGCTGTCAGGACGGCCAGACCGGGGAATGAGGGCGAGATACACAAGGATCGAGCCAAAAGCTGCAAC  
CTCATGTGA

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**FIGURE 4878**

MEGQSGRCKIVVVGDAECGKTALLQVFAKDAYPGSYVPTVFENY TASFEIDKRRIELNMWDISGSSYYDNVRPLA  
YPDSDAVLICFDISRPETLDSVLKKWQGETQEFPCNAKVVLVGCKLDMRTDLATLRELSKQRLIPVTHEQGTVLA  
KQVGAVSYVECSSRSSERSVRDVFHVATVASLGRGHRQLRRTDSRRGMQRSAQLSGRPDRGNEGEIHKDRAKSCN  
LM

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**FIGURE 4879A**

GGCGGAAGCACGATCTCCGGCAGCGGCTGGGAACCTCTTAGCTGAGCAGGCGAGAGCATCATGGATACCGACTTA  
TATGATGAGTTTGGGAATTATATTGGACCAGAGCTTGATTCTGATGAAGATGATGATGAATTGGGTAGAGAGACC  
AAAGATCTTGATGAGATGGATGATGATGACGACGACGATGACGTAGGAGATCATGACGATGACCACCCTGGGATG  
GAGGTGGTGCTGCATGAGGACAAGAAGTACTACCCAACAGCCGAGGAGGTGTATGGTCTGAGGTGGAGACCATA  
GTTCAAGAGGAAGACACTCAGCCTCTCACAGAACCCATTATTAAGCCAGTGAAAACCAAGAAATTCATCTGATG  
GAGCAGACATTACCTGTTACGGTGTATGAGATGGATTTCTTGGCGGATCTGATGGATAACTCAGAGCTCATCAGA  
AATGTGACCCCTTTGTGGACATCTCCACCATGGCAAGACATGTTTTGTGGATTGTTTAATTGAACAGACTCACCCG  
GAAATCAGAAAGCGCTATGACCAAGATCTGTGCTATACTGACATCCTCTTCACAGAGCAAGAGAGAGGTGTAGGC  
ATCAAAAGCACTCCGTGTGACAGTGGTCTTGCCAGACACCAAAGGAAAATCTTATCTCTTCAATATCATGGACACT  
CCAGGACATGTGAATTTCTCTGATGAGGTACAGCTGGCTTGCGCATCTCAGATGGAGTGGTCTTTTCATTGAT  
GCTGCTGAGGGGGTGATGCTGAACACAGAGCGGCTGATCAAGCATGCGGTGCAGGAGAGGCTGGCAGTCACTGTG  
TGCATCAACAAGATTGACCGGCTGATCCTGGAGCTGAAGCTGCCTCCAAGTATGCTTATTACAAGCTGCGCCAC  
ATTGTGGATGAGGTCAATGGATTAATAAGCATGTATTCCACTGATGAGAACCCTGATCCTTTCCCCACTCCTGGGT  
AACGTCTGCTTCTCCAGCTCCAGTACAGCATCTGCTTACGCTGGGCTCCTTTGCCAAGATCTATGCCGACACC  
TTTGGTGACATTAATTACCAAGAATTTGCTAAAAGACTCTGGGGTGACATCTACTTCAACCCTAAGACGCGAAAG  
TTCACCAAAAAGGCCCCAACTAGCAGCTCCAGAGAAGTTTCGTGGAGTTTATCTTGGAGCCTCTTTATAAGATC  
CTCGCCAGGTTGTAGGTGACGTGGACACCAGCCTCCACGGACCTAGACGAGCTTGGCATCCACCTGACGAAG  
GAGGAGCTGAAGCTGAACATCCGCCCCCTTGCTCAGGCTGGTCTGCAAAAAGTTCTTTGGCGAGTTCACAGGCTTT  
GTGGACATGTGTGTGACGATATCCCTTCTCCAAAGGTGGGCGCAAGCCCAAGATTGAGCACACCTACACCGGT  
GGTGTGGACTCCGACCTCGCGAGGCTATGAGTGACTGTGACCCTGATGGCCCCCTGATGTGCCACACTACTAAG  
ATGTACAGCACAGATGATGGAGTCCAGTTTACGCCTTTGGCCGGGTGCTGAGTGGCACCATTTCATGCTGGGCAG  
CCTGTGAAGGTACTGGGGGAGAACTACACCCTGGAGGATGAGGAAGACTCCAGATATGCACCGTGGGCCGCTT  
TGGATCTCTGTGGCCAGGTACCACATCGAGGTGAACCGTGTCTCTGCTGGCAACTGGGTCTGATTGAAGGTGTT  
GATCAACCAATTGTGAAGACAGCAACCATAACCGAACCCCGAGGCAATGAGGAGGCTCAGATTTTCCGACCCTTG  
AAGTTCAATACCACATCTGTTATCAAGATTGCTGTGGAGCCAGTCAACCCTCAGAGCTGCCCAAGATGCTTGAT  
GGCCTGCGCAAGGTCAACAAGAGCTATCCATCCCTCACCACCAAGGTGGAGGAGTCTGGCGAGCATGTGATCCTG  
GGCACTGGGGAGCTCTACCTGGACTGTGTGATGCATGATTTGCGGAAGATGTACTCAGAGATAGACATCAAGGTG  
GCTGACCCAGTTGTACGTTTGTGAGACGGTGGTGGAAACATCTCCCTCAAGTGCTTTGCTGAAACGCTAAT  
AAGAAGAACAAGATCACCATGATTGCTGAGCCTCTTGAGAAGGGCCTGGCAGAGGACATAGAGAATGAGGTGGTC  
CAGATTACGTGGAACAGGAAGAAGCTGGGAGAGTCTTCCAGACCAAGTACGATTGGGATCTGCTGGCTGCCCCGT  
TCCATCTGGGCTTTTGGCCCTGATGCGACTGGCCCCAACATTCTGGTGGATGATACTCTGCCCTCTGAGGTGGAC  
AAGGCTCTTCTGGTTCAAGTGAAGGACAGCATCGTTCAAGTTTCCAGTGGGGAACAGGGAGGGCCCCCTCTGT  
GATGAATTGATTGGAATGTCAAGTTTAAGATCTGGATGCGGTGGTTGCCAGGAGCCCCTGCACCGGGGCGGG  
GGCCAGATCATCCCCACAGCCAGGAGAGTCGTCTACTCTGCCTTCTCATGGCTACTCCTCGTCTGATGGAGCCT  
TACTACTTTGTAGAGGTCCAGGCCCCCTGCAGATTGCGTCTCTGCAGTTTATACCGTCTCGGCCAGGCGCAGGGGG  
CACGTGACTCAGGATGCACCCATCCCAGGCTCCCTCTGTACACCATCAAAGCTTTTATCCCGGCCATCGACTCT  
TTTGGCTTTGAGACTGATCTCCGACTCACACCCAGGACAAGCCTTTTCTCTGTCTGTCTTCCACCACTGGCAG  
ATTGTGCCTGGTGATCCCCTGGACAAGAGCATTGTATCCGCCCTTGGAGCCACAGCCAGCTCCTCACCTGGCC  
CGGGAATTCATGATCAAAACCCGCGTAGGAAGGGCCTCAGTGAAGATGTGAGCATCAGCAAATCTTCGATGAT  
CCTATGTTGTGGAACCTTGCCAAACAGGATGTTGTGCTCAATTACCCCATGTGAGTGCCTGGACTCCTGGGAGCT  
CCTGCTCCCTACAGTGGGCTGCAACTCCTGTACTTGAAGCTGAGACCTCATATGACGTGGCCTTCGTGTTGTGAG  
AGAGTGTCTGGAAGCTGCTGTGCCATCTTGAACAACTCACCACCTCCAACCCAGAGCCCCAGTGAGAGAGGAG  
CATTTGGCCTCCTGCTTCTTCTGTGGCCTCTGCCGGGCTCCATTCCAAGGAAAAGAGAGGAGCTTGGGCTCAC  
AGAAAGAGAAGGGGATGAAACCCCAAGGGGCCCTATCTTTGGGATTACATGGAATTTTATTTTCTACAAGTTTG  
ACCTTAGCCATGGTTTGAAGTGAACAGAACATTCTGACCTCTGTCTTGCTCTGCTCCTTTCATCCTCGTCTCCC  
CTGCCCCATCTGGTGCTTACATTCTGAATATATGTATCTCCCAAGAGGCTTCACTGCCTCTGCTTCCAGCTGCA  
GCCTCCTTCTGCTGGGTCCCAGGGAAGCCGCTGCCTTTTAATTCAGTGTTCCCATGAGCGCCAAGGCCCCA  
TTATTGCCCCCTTGCTCCCACTCCATGCTGCTTCTGGGTGGGACCTAAGATGGCTTGGGAGTTGTTGGGTTCTCTG

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**FIGURE 4879B**

CGATCAGAAGTCTACCCACACCTCCTCAGGAACTGCTGCCTCCCCTAAGAATCTTCCTTGCCCTGGAGTAGG  
GGGCCAGAGCACTTTGATTTCAGCCATTTACTCCAAGTCCTCTCCCCAGCTACCACCAGTCCCTTACTCTGTTC  
TCCCCAGTGAAAAAGAGTCTGTTGATTTTCCTC

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**FIGURE 4880**

AGAGCCAGAGCAGGATGGAGAGGAGACGCATCACCTCCGCTGCTCGCCGCTCCTACGTCCTCAGGGGAGATGA  
TGGTGGGGGGCTGGCTCCTGGCCGCGCTCTGGGTCTGGCACCCGCTCTCCCTGGCTCGAATGCCCCCTCCXA  
CTCCCGACCCGGGTGGATTCTCCCTGGCTGGGGCACTCAATGCTGGCTTCAAGGAGACCCGGGCCAGTGAGCGG  
GCAGAGATGATGGAGCTCAATGACCGCTTTGCCAGCTACATCGAGAAGGTTTCGCTTCTGGAACAGCAAAACAAG  
GCGCTGGCTGCTGAGCTGAACCAGCTGCGGGCCAAGGAGCCACCAAGCTGGCAGACGTCTACCAGGCTGAGCTG  
CGAGAGCTGCGGGCTGCGGCTCGATCAACTCACCGCCAACAGCGCCCGCTGGAGGTTGAGAGGGACAATCTGGCA  
CAGGACCTGGCCACTGTGAGGCAGAAGCTCCAGGATGAAACCAACCTGAGGCTGGAAGCCGAGAACAACCTGGCT  
GCCTATAGACAGGAAGCAGATGAAGCCACCCTGGCCCGTCTGGATCTGGAGAGGAAGATTGAGTCGCTGGAGGAG  
GAGATCCGGTTCTTGAGGAAGATCCACGAGGAGGAGGTTTCGGGAACCTCCAGGAGCAGCTGGCCCGACAGCAGGTC  
CATGTGGAGCTTGACGTGGCCAAGCCAGACCTCACCGCAGCCCTGAAAGAGATCCGCACGCAGTATGAGGCAATG  
GCGTCCAGCAACATGCATGAAGCCGAAGAGTGGTACCCTCCAAGTTTGACAGCTGACAGACGTGCTGCCCGC  
AACGCGGAGCTGCTCCGCCAGGCCAAGCACGAAGCCAACGACTACCGGCGCCAGTTGCAGTCCTTGACCTGCGAC  
CTGGAGTCTCTGCGCGGCACGAACGAGTCCCTGGAGAGGCAGATGCGCGAGCAGGAGGAGCGGCACGTGCGGGAG  
GCGGCCAGTTATCAGGAGGCGCTGGCGCGGCTGGAGGAAGAGGGGCAGAGCCTCAAGGACGAGATGGCCCGCCAC  
TTGCAGGAGTACCAGGACCTGCTCAATGTCAAGCTGGCCCTGGACATCGAGATCGCCACCTACAGGAAGCTGCTA  
GAGGGCGAGGAGAACCGGATCACCATTCCCGTGCAGACCTTCTCCAACCTGCAGATTGAGAAAACAGCCTGGAC  
ACCAAGTCTGTGTGAGAAGGCCACCTCAAGAGGAACATCGTGGTGAAGACCGTGGAGATGCGGGATGGAGAGGTC  
ATTAAGGAGTCCAAGCAGGAGCACAAGGATGTGATGTGAGGCAGGACCCACCTGGTGGCCTCTGCCCCGTCTCAT  
GAGGGGCCCCGAGCAGAAGCAGGATAGTTGCTCCGCTCTGCTGGCACATTTCCCCAGACCTGAGCTCCCCACCAC  
CCCAGCTGCTCCCCCTCCCTCCTCTGTCCCTAGGTGAGCTTGTGCTGCCCTAGGCTCCGTGAGTATCAGGCCTGCCAG  
ACGGCACCCACCCAGCACCCAGCAACTCCAACCTAACAAGAACTCACCCCCAAGGGGCAGTCTGGAGGGGCATGG  
CCAGCAGCTTGCGTTAGAAATGAGGAGGAAGGAGAGAAGGGGAGGAGGGCGGGGGGCACCTACTACATCGCCCTCC  
ACATCCCTGATTCTGTTGTTATGGAACCTGTTGCCAGAGATGGAGGTTCTCTCGGAGTATCTGGAACTGTGCC  
TTTGAGTTTCTCAGGCTGCTGGAGGAAAACCTGAGACTCAGACAGGAAAGGGAAGGCCCCACAGACAAGGTAGCC  
CTGGCCAGAGGCTTGTTTTGTCTTTTGGTTTTTATGAGGTGGGATATCCCTATGCTGCCTAGGCTGACCTTGAAC  
TCCTGGGCTCAAGCAGTCTACCCACCTCAGCCTCCTGTGTAGCTGGGATTATAGATTGGAGCCACCATGCCCAGC  
TCAGAGGGTTGTTCTCCTAGACTGACCTGATCAGTCTAAGATGGGTGGGGACGTCCTGCCACCTGGGGCAGTCA  
CCTGCCCAGATCCCAGAAGGACCTCCTGAGCGATGACTCAAGTGTCTCAGTCCACCTGAGCTGCCATCCAGGGAT  
GCCATCTGTGGGCACGCTGTGGGCAGGTGGGAGCTTGATTCTCAGCACTTGGGGGATCTGTTGTGTACGTGGAGA  
GGGATGAGGTGCTGGGAGGGATAGAGGGGGGCTGCCTGGCCCCCAGCTGTGGGTACAGAGAGGTCAAGCCCAGGA  
GGACTGCCCCGTGCAGACTGGAGGGGACGCTGGTAGAGATGGAGGAGGAGCAATTGGGATGGCGCTAGGCATAC  
AAGTAGGGGTTGTGGGTGACCACTTGCCCTCTGGATTGTGGGAATTAAGGAAGTGACTCATCTCTTGA  
AGATGCTGAAACAGGAGAGAAAGGGGATGTATCCATGGGGGCAGGGCATGACTTGTCCATTCTAAAGGCCTC  
TTCCTTGCTGTGTACATACCAGGCCGCCAGCCTCTGAGCCCCCTGGGACTGCTGCTTCTTAACCCAGTAAGCCA  
CTGCCACACGTCTGACCTCTCCACCCCATAGTGACCGCTGCTTTTCCCTAAGCCAAGGGCCTCTTGCGGTCCC  
TTCTTACTCACACACAAAATGTACCCAGTATTCTAGGTAGTGCCCTATTTTACAATTGTAAACTGAGGCACGAG  
CAAAGTGAAGACACTGGCTCATATTCTGACGCTGGAGGCCGGGTGCTCAGGGCTGACACGTCCACCCAGTGC  
ACCCACTCTGCTTTGACTGAGCAGACTGGTGAGCAGACTGGTGGGATCTGTGCCCAGAGATGGGACTGGGAGGGC  
CCACTTCAGGGTTCTCCTCTCCCCTTAAGGCCGAAGAAGGGTCTTCCCTCTCCCCAAGACTTGGTGTCTTTC  
CCTCCACTCCTTCTGCCACCTGCTGCTGCTGCTGCTGCTAATCTTCAGGGCACTGCTGCTGCCTTTAGTCGCTG  
AGGAAAAATAAGACAAATGCTGCGCCCTT

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**FIGURE 4881**

CCTCTCTCCGGGCGGTGCCTCCAAGATGACAAAGAAAAGAAGGAACAATGGGCGTGCCAAAAGGGCCGCGGCCA  
CCTGCAACCTATTTCGCTGCACTAACTGTGCCCCGATGCGTGCCCAAGGACAAGGCCATTAAGAAATTCGTCATTTCG  
AAACATAGTGGAGGCCGCAACAGTCAGGGACATTCTGAAGTGAGCGTCTTCGATGCCTATGTGCTTCCCAAAC  
GTATGTGAAGCTACATTACTGTGTGAGTTGTGCAATTCACAGCAAAGTAGTCAGGAATCGATCTCGTGAAGCCCCG  
CAAGGACCGAACACCCCCACCCCGATTAGACCTGCGGGTGCTGCCCCAGGTCCCCACCAAAGCCCATGTAAGG  
AGCTGAGTTCTTAAAGACTGAAGACAGGCTATTCTCTGGAGAAAAATAAAATGGAAATTGTACTT



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**FIGURE 4882**

MTKKRRNNGRAKKGRGHLQPIRWTNCARCVPKDKGIKKFVIRNIVEAATVRDISEVSVFDAYVLPKLYVKLHYCV  
SCAIHSKVVRNRSREARKDRTPPPRFRPAGAAPGPPPKPM

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**FIGURE 4883A**

GGCAGGAGGCTGCTCTCGCAACTCAAGATGCGGACGAGAGTGAGACAGCAGTGAAGCCGCCGGCACCTCCGCTG  
CCGCAGATGATGGAAGGGAACGGGAACGGCCATGAGCACTGCAGCGATTGCGAGAATGAGGAGGACAACAGCTAC  
AACC GG GTTGGTTTGTAGTCCAGCCAATGACACTGGAGCCAAAAAGAAGAAAAAGAACAAAAAAGAAGAAAGAA  
AAAGGCAGTGAGACAGATTAGCCAGGATCAGCCTGTGAAGATGAACTCTTTGCCAGCAGAGAGGATCCAGGAA  
ATACAGAAGGCCATTGAGCTGTTCTCAGTGGGTGAGGACCTGCCAAAACCATGGAGGAGGTAGCAAGCGAAGC  
TACCAGTTCTGGGATACGAGCCCGTCCCCAAGCTGGGCGAAGTGGTGAACACCCATGGCCCCGTGGAGCCTGAC  
AAGGACAATATCCGCCAGGAGCCCTACACCCTGCCCCAGGGCTTACCTGGGATGCTTTGGACTTGGGCGATCGT  
GGTGTGCTAAAAGAACTGTACACCCTCCTGAATGAGAATATGTGGAAGATGATGACAACATGTTCCGATTTGAT  
TATTCGCCGAGTTTCTTTTGTGGGCTCTCCGGCCACCCGGCTGGCTCCCCAGTGGCACTGTGGGTTTCGAGTG  
GTCTCAAGTCGGAATTTGGTTGGGTTTATTAGCGCCATCCAGCAAACATCCATATCTATGACACAGAGAAGAAG  
ATGGTAGAGATCAACTTCTGTGTGTCCACAAGAAGCTGCGTTCCAAGAGGGTGTCTCCAGTTCTGATCCGAGAG  
ATCACCAGCGGGGTTACCTGGAGGGCATCTTCCAAGCAAGTTTACACTGCCGGGTGGTACTACCAAAGCCCGTT  
GGCACCTGCAGGTATTGGCATCGGTCCCTAAACCCACGGAAGCTGATTGAAGTGAAGTTCTCCACCTGAGCAGA  
AATATGACCATGCAGCGCACCATGAAGCTCTACCGACTGCCAGAGACTCCCAAGACAGCTGGGCTGCGACCAATG  
GAAACAAAGGACATTCAGTAGTGACACAGCTCCTCACCAGGTACTTGAAGCAATTTACCTTACGCCCGTCATG  
AGCAGGAGGAGGTGGAGCACTGGTTCTACCCACGAGAGAATATCATCGACACTTTCGTGGTGGAGAACGCAAC  
GGAGAGGTGACAGATTTCTGAGCTTTTATACGCTGCCCTCCACCATCATGAACCATCCAACCCACAAGAGTCTC  
AAAGCTGCTTATTCTTTCTACAACGTTACACCCAGACCCCTCTTCTAGACCTCATGAGCGACGCCCTTGTCTCTC  
GCCAAATGAAAGGGTTTGATGTGTTCAATGCACTGGATCTCATGGAGAACAAACCTTCTGGAGAAGCTCAAG  
TTTGGCATAGGGGACGGCAACCTGCAGTATTACCTTTACAATTGGAAATGCCCCAGCATGGGGGAGAGAAGGTT  
GGACTGGTGTACAAATAACAGTCAACAGTGCATTCTGGATAAAGCCACTGAAAATTGAAACAGGAAATGGAA  
CCCCACCACTGTTGGTCCAATTTTACACACGTGAGAATCCCTGGCAAAGGGAGCAGAACTGAACCGGCTTTACC  
AAACCGCCAGCGAACCTTGACAATTGTATTGCGATGGCGTGGGCTGCGTGACGTACCTCCGGTCTGTCTCTGGT  
CTCCGTGTTTTCAGTTAATTACATCCTCATGCAGCCGTGATCAAGGGAATGTAAGTCTGAAAAGTCTGCTG  
ATTGGCATATAATGGAGTTAACGGGTGAATAATAAAGTATATATATATATATATATATATATATATATATAT  
AICTTTTCATGTTCCAAATGTACAAGGATGTTTGGTCTTTAATGAAAAGCTGAATCTAGATCATTCTCAGAATGA  
GGACCCGAGGACAGTGGCAGACAGACGCGTTGGCACAGTTCATGGTTTCTCCAGAGGAGACATTGGCTTATCAT  
GGGGAAGAGAGGATCTGGAGAACCTCATCCAGCTCCCTTCTGAATCAGCTGGGATGACTGGCTTTGAGAAGGA  
AGGGAAGATGGAACAGGCTCAGATCTCATGGGATAGCACGTGGAGCTCTTGGCTGGGGCTGACCTGGGCAGGGA  
CTTTCTGCAGGGCCAGACCTGCCTGCATTCTGAGACAAAGCAATGGACGGTCCGAGAGAGACCTCATTGAT  
TGAGTCTTTTCTCCATCCCTTGGCCTGCTCCCTGTAGGAAGTCATCTGCCAACTGATTTAAAGGGCTCTTT  
AGCCAGTTGTTGCCAACCTTATAGGGATGAGTCCCTGTGAGATTTTGTCTTTTCCACTGCCTGGGATGATGCAGT  
TTGAAGAGGCCCTTGGACCTCCTTGTAACATCAGGGACCTTTGGAGACCATTATCAGTGTAAAGCCCTGCTTAGCT  
CATCTTAGAGCAAAGAGCCAGCACCTGATGTCCCTGGGGTGGCTAGGCAGGAGTGGCGTGGGGCCAATACCCAG  
ACCCCTTCAGCCACCAGCCCTGGCCTGTGCCCTTCAACCCATTAGCCATTTCTTGTGTGCCCTTTTCCAAGAT  
ACAGCCTGCAAGTGGTAGCAAGAAGTGATTAGAGGCAGATCTGGACTTGGCAACAGAAGTGGTTTCCCATCTCCA  
TTGTCTGAGTCTGATTTTTCGCTGATGCTGTTTTGTGGATTTTTGTGGTAGTGATGGTTGTGAGTGTGCCAGTTT  
CCCCAAACGTAATCAAGCCTCTGGTCAATGGCTGTGATGTAGGCATTCTGGAGTGGTGTTCAGCCAAGTGACC  
GGGCAAAATTGGGCTGTGAAATTGTACTTCCAGGCTTGGATGTAATTTTTGCTCTAGAGAGAAGCAAGTGGTGGG  
AAGGAGGTAGCATGACGTGTGGTGTGCGGGTTTCTTGTGCTGCCGTACCTCTCCGCTCATACAGGAATGAAGCCT  
TAGCCAGGAGGCCAGGCTCAGCCCTGTGCCACTACCGAAGCCACTTTCTACAGGCCAGCAGGGGCTTGTGTCAG  
GCTGTGGGTTTTTGGTGTGGTTTGTGAGGGCTAATTCTGCAGAGTTTCCAAAACCAGAAGACATCGTATGCTTGG  
GATGGGGGCCGTGCCACCCGTGGGAATGCTGCCCGCTCTGCAGACTGCTGCTAGAGCCAGCAACTCCACTAAGGT  
GGATTTTTCATCAGGGGCCCTGCAGGGCCCTCCCTTTTCCATTGTTCTGCGCTGCAAATTGCAGGGCCCAGCAAT  
CGTGAAGTACGTTTGTCTTGTACTCCAAGAACTGAGACCAAGAAAGCTGCTGTTCTTAGCAAGATGCGCACTG  
CATTCCACAGGTGGGAGGAGTCGGAGAGGCAGGGGCTTGTCTTGCAGCCCCACAGACAACAGTTGCACAGTGCCT  
CAAGCCCCAGAGTGGCTCACCTGTCCAGACCTTTGAGGATATCAAAGGACAAAGTGCCCAAGTCTTTCTACCT  
TGGGGGAACCTGGAACCTGGAAAGGCTCCCTGTCTAGTCTTGATCTGTTCTGGGCCAGGTCCAGCTTGAGCTG

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**FIGURE 4883B**

CCTCTGAGATTTGGGCTGTGCGGATCTCTGGAGTGAGCTCTGTTTCGGTTGACCCAGGTCATGGAATGGAAACGG  
TGAGGCCCCAGTGGCTGTTCTGGAAGAAACAGATCTCCTGGCAAAGGCCCCAGCATCTCCCTCACTGAAACCAGG  
TGGCCGGCTCCTCGGACTCTGCTTTATGTTGCGGTGAGAACTCTGCCCAGGTGTGCAGGGTTTGGCTTGTGGGCT  
GCTTGCTGCTCATCTGATTTTGTCCCAGTAGTCCCTGCGTTCTTCATTCAACCCCTTCTGGGACTTCAGCTCAG  
AGAGCACCATCCCGGGGGTCAGGGCCTCCCCACAGGAGCCCTGCAGTGTGGTAGCGCCATGGCTGTCTCAAACCA  
AGCAAAGGAAGGACCCTGAGGCCTTCACGCTAACCATCCTCGAGCAACTGCTGTTGGAAGGCCTCCCTGGGCCTG  
GCCCCACCCCTCTGCCACCCAGTCCCTCCAGCTGCCATGTTTCAAAGACGACCTTTACCTCCTGCCTTTGGATTG  
ACTCTGCATTTGACCACGGACTCCAGTCTGTGTGTAGGGAGAGAGCTGAGTAGGAGGCCTCCACTCCGGATCGAG  
GCCTGTATAGGGCTCGTTTCCCCACACATGCCTATTTCTGAAGAGGCTTCTGTCTTATTTGAAGGCCAGCCCACA  
CCCAGCTACTTTAACACCAGGTTTATGGAAAATGTCAGGCCTTCCCCACAACCTCCTGTCTAACTGCTGTGCCCC  
CCTACTTGCTGGCTCTCAGAAGCCTAGGGGAGTCCCTGTGGTCTGTAATTCTTTCCCCAAAGACGACCAGCATTT  
AACCAACCTAAGGGCCCCAAGGCCTTGGACAACCTGCATGGAGCTGCACTCTAGGAGAAGGAGGGGAACCAGATGT  
TAGATCAGGGGAGGGAGCAGGAGTGTCCCTCCCGTCAGTGCCTACCCACCTGTGAGGCAGCCTTCTGATGGCCTG  
GCCCCCCTTCCCCAGAACCAGGGGAGGCCTGAGGCCTTCACTTTTACTCTGCTGCAAAATGAAGGCGGGCCTGCAA  
GCCGACTACACCTACGGAGGCTGTTGAGGACAATTTCACTCCATTAAATTAAAAAATACTGACTGGCTGGCAGGC  
AGGTGCCATGTCTGGGAACAGGGACGGGGAGCTTACCTTTTTGTCTTGGCTTTTCTTTGGGCTGTGGGGGGC  
ATCCATTTCCAGGTCGGGGAGGAAATACCAAATGCATTGTTGTTCTGCTCAATACATCTCACTTGTTCCTAATA  
AAGAAAGCAGCTGAACAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4884**

MADESETAVKPPAPPLPQMMEGNGNGHEHCSDCENEEDNSYNRGGLSPANDTGAKKKKKQKKKKEKGETDSAQ  
DQPVKMNSLPAERIQEIQKAIELFSVGQGPACTMEEASKRSYQFWDTPVVKLGEEVNTGHPVEPDKNIRQEPY  
TLPQGFWDALDLGDRGVLKELYTLLNENYVEDDDNMFRFDYSPEFLLWALRPPGWLPQWHCGVRVSSRKLVGF  
ISAIPANIHIYDTEKKMVEINFLCVHKKLRSKRVPVLIREITRRVHLEGIFQAVYTAGVVLPKPVGTCRYWHR  
LNPRKLIEVKFSLSRNMTMQRTMKLYRLPETPKTAGLRPMETKDIPVVHQLLTRYLKQFHLTPVMSQEEVEHWF  
YPQENIIDTFVVENANGEVTDFLSFYTLPTIMNHPHKSLSKAAYSFYNVHTQTPLLDLMSDALVLAKMKGFDVF  
NALDLMENKTFLEKLKFGIGDGNLQYYLYNWKCPSMGAEKVGLVLQ

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**FIGURE 4885**

TTCGCTCGCCGCCTCGCTCAGAGCCGGGGCCGGGCCAGAGCGGGCGCCCGCTGCCCTGTCCCCGCGTGCAGACCC  
CGGGCCCGGCCCGGCCCGCCCGCCCAAGCCATGCTGTGCGGCCGCTGGAGGCGTTGCCCGCCCGCCCGAGGAGC  
CCCCGGTGGCCGCCAGGTTCGAGCCCAAGTCGCGGCCCGGCTCGCTCTCCCGTCCCCGCCGACTCCCTCCGATG  
CGGGACCAAGAGGCCCGGGCTGCGGGCGCTGAAGAAGATGGGCCTGACGGAGGACGAGGACGTGCGGCCATGC  
TGGGGGCTCCCGGCTCCGCAAGATCCGCTCGCGCACGTGGCACAAGGAGCGGCTGTACCGGCTGCAGGAGGACG  
GCCTGAGCGTGTGGTTCCAGCGGCGCATCCCGGCTGCGCCATCGCAGCACATCTTCTTCGTGCAGCACATCGAGG  
CGGTCCCGCGAGGGCCACCAGTCCGAGGGCCTGCGGCGCTTCGGGGGTGCCCTTCGCGCCAGCGCGCTGCCTCACCA  
TCGCCTTCAAGGGCCGCGCAAGAACCCTGGACCTGGCGGCGCCACGGCTGAGGAAGCGCAGCGCTGGGTGCGCG  
GTCTGACCAAGCTCCGCGCGCGCCTGGACGCCATGAGCCAGCGCGAGCGGCTAGACCACTGGATCCACTCCTATC  
TGCACCGGGCTGACTCCAACCAGGACAGCAAGATGAGCTTCAAGGAGATCAAGAGCCTGCTGAGAATGGTCAACG  
TGGACATGAACGACATGTACGCCTACCTCCTCTTCAAGGAGTGTGACCACTCCAACAACGACCGTCTAGAGGGGG  
CTGAGATCGAGGAGTTCCTGCGGCGGCTGCTGAAGCGGCCGGAGCTGGAGGAGATCTTCCATCAGTACTCGGGCG  
AGGACCGCGTGTGAGTGGCCCTGAGCTGCTGGAGTTCCTGGAGGACCAGGGCGAGGAGGGCGCCACACTGGCCC  
GCGCCAGCAGCTCATTACAGCTATGAGCTCAACGAGACAGCCAAGCAGCATGAGCTGATGACACTGGATGGCT  
TCATGATGTACCTGTTGTCGCGGAGGGGGCTGCCTTGGACAACACCCACACGTGTGTGTTCCAGGACATGAACC  
AGCCCCCTTGCCCACTACTTCATCTCTTCTCCCAACACCTATCTGACTGACTCCAGATCGGGGGGCCAGCA  
GCACCGAGGCCTATGTTAGGGCCTTTGCCAGGGATGCCGTGCGTGGAGCTGGACTGCTGGGAGGGGCCAGGAG  
GGGAGCCCGTCATCTATCATGGCCATACCTCACCTCCAAGATTCTTCCGGGACGTGGTCCAAGCCGTGCGCG  
ACCATGCCCTTACGCTGTCCCCTTACCCTGTCTATCTATCCCTGGAGAACCACCTGCGGGCTGGAGCAGCAGGCTG  
CCATGGCCCGCCACCTCTGCACCATCTGGGGGACATGCTGGTGACACAGGCGCTGGACTCCCCAAATCCCGAGG  
AGCTGCCATCCCCAGAGCAGCTGAAGGGCCGGGTCTGGTGAAGGGAAAGAGTTGCCCGTGTCTCGGAGCGAGG  
ATGGCCGGGCTCTGTGCGATCGGGAGGAGGAGGAGGATGACGAGGAGGAAGAAGAGGAGGTGGAGGCTGCAG  
CGCAGAGGCGGCTGGCCAGCAGATCTCCCGGAGCTGTGCGCCCTGGCTGTGTACTGCCACGCCACCCGCTGC  
GGACCTTGACCCCTGCCCCCAAGCCCCACAACCCTGCCAGGTCAGCTCCCTCAGCGAGCGCAAAGCCAAGAAAC  
TCATTCCGGGAGGCAGGGAACAGCTTTGTGAGGCACAATGCCCGCCAGCTGACCCGCGTGTACCCGCTGGGGCTGC  
GGATGAACTCAGCCAACTACAGTCCCCAGGAGATGTGGAACCTGGGCTGTGAGCTGGTGGCCTTGAACCTCCAGA  
CGCCAGGCTACGAGATGGACCTCAATGCCGGGCGCTTCCTAGTCAATGGGCAGTGTGGCTACGTCTAAACCTG  
CCTGCCTGCGGCAACCTGACTCGACCTTTGACCCGAGTACCCAGGACCTCCAGAACCACTCTCAGCATCCAGG  
TGCTGACTGCACAGCAGCTGCCCAAGCTGAATGCCGAGAAGCCACACTCCATTGTGGACCCCTGGTGCGCATTG  
AGATCCATGGGGTGCCCGCAGACTGTGCCCGGAGGAGACTGACTACGTGCTCAACAATGGCTTCAACCCCGCT  
GGGGGAGACCTGCAGTTCCAGCTGCGGGCTCCGGAGCTGGCACTGGTCCGGTTTGTGGTGAAGATTATGACG  
CCACCTCCCCCAATGACTTTGTGGGCCAGTTTACACTGCCTCTTAGCAGCCTAAAGCAAGGGTACCGCCACATAC  
ACCTGCTTTCCAAGGACGGGGCCTCACTGTCAACAGCCACGCTCTTCATCCAAATCCGCATCCAGCGCTCCTGAG  
TAGCTGGGACTACAGGCACAGGCCACCACACCTGGCTAATGTTTAAATTTTATGTAGAGATGGCGGGGGGGCGG  
GGGTCTCCCTATGCTGCCAGGCTGGTCTCGAGCTCCTGACCTCAAGTGATCCTCTGCCCCAGCATTCCAAAGT  
GCTGGGATTACAGGTGTGAGCCACTGCCTGGCCTGGCCGTAGGTTGTAACTGTTTCATAGAAGAGCCCTGGAGA  
AGACAGTAGAATGAGCCTATCTAGTTTAAAAAATAAAGAAGCACGTTGATTTCAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4886**

MLCGRWRRRCRRPPEEPPVAAQVAAQVAAPVALPSPTPSDGGTKRPLRALKKMGLTEDEDVRAMLRGSRLRKIR  
SRTWHKERLYRLQEDGLSVWFQRRIPRAPSQHIFVQHI EAVREGHQSEGLRRFGGAFAPARCLTIAFKGRKKNL  
DLAAPTAEAAQRWVRGLTKLRARLDAMSQRERLDHWIHSYLHRADSNQDSKMSFKEIKSLLRMVNVDMNDMYAYL  
LFKECDHSNNDRLEGAEIEEFLRRLKRPLEEIFHQYSGEDRVLSAPELLEFLLEDQGEEGATLARAQQLIQTYE  
LNETAKQHELMTLDGFM MYLLSPEGAALDNTHTCVFQDMNQPLAHYFISSSHNTYLTDSQIGGPSSTEAYVRAFA  
QGCRVELDCWEGPGGEPVIYHGHTLTSKILFRDVVQAVRDHAFTLSPYPVILSLENHCGLEQQAAMARHLCTIL  
GDMLVTQALDSPNPEELPSPEQLKGRVLVKGKKLPAARSEDGRALSDREEEEDDEEEEEEVEAAAQRRLAKQIS  
PELSALAVYCHATRLRTLHPAPNAPQPCQVSSLERKAKKLIREAGNSFVRHNARQLTRVYPLGLRMNSANYSPQ  
EMWNSGCQLVALNFQTPGYEMDLNAGRFLVNGQCGYVLKPACLRQPDSTFDPEYPGPPRTTLSIQVLTAQQLPKL  
NAEKPHSIVDPLVRIEIHGVPADCARQETDYVLNNGFNPRWGQTLQFQLRAPELALVRFVVEDYDATSPNDFVGQ  
FTLPLSSLKQGYRHIHLLSKDGASLSPATLFIQIRIQRS

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**FIGURE 4887**

CGGCCACGAGGCGGAATCCCTTCTGCTCTCCACGCGCAGCGCCGCCCGGCCCTCCAGCTTCCCGGACCATG  
GCCAACCTGGAGCGCACCTTCATCGCCATCAAGCCGGACGGCGTGCAGCGCGGCCTGGTGGGCGAGATCATCAAG  
CGCTTCGAGCAGAAGGGATTCCGCCTCGTGGCCATGAAGTTCCCTCCGGGCTCTGAAGAACACCTGAAGCAGCAC  
TACATTGACCTGAAAGACCGACCATTCCTCCCTGGGCTGGTGAAGTACATGAACTCAGGGCCGGTTGTGGCCATG  
GTCTGGGAGGGGCTGAACGTGGTGAAGACAGGCCGAGTGATGCTTGGGGAGACCAATCCAGCAGATTCAAAGCCA  
GGCACCATTCTGTTGGGACTTCTGCATTCAAGTTGGCAGGAACATCATTGATGGCAGTGATTGAGTAAAAAGTGCT  
GAAAAAGAAATCAGCCTATGGTTTAAGCCTGAAGAACTGGTTGACTACAAGTCTTGTGCTCATGACTGGGTCTAT  
GAATTAGAGGTGGACACAACAGCAGTCTCCTTCAGCACGGCGTGGTGTGTCCCTGGACACAGCTCTTCATTCCAT  
TGACTTAGAGGCAACAGGATTGATCATTCTTTTATAGAGCATATTGCCAATAAAGCTTTTGAAGCCGG

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**FIGURE 4888**

MANLERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVAMKFLRASEEHLKQHYIDLKDRPFFPGLVKYMNSGPVVA  
MVWEGLVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVKSAEKEISLWFKPEELVDYKSCAHDWV  
YE



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**FIGURE 4889**

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG  
GAAGGAACCATGGCCAACCTGTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGTCTTGTGGGA  
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGICTGAAATTCATGCAAGCTTCCGAAGATCTT  
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG  
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCCGAGTCATGCTCGGGGAGACCAACCCTGCA  
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT  
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTTGGTTTCACCCTGAGGAACTGGTAGATTACACGAGCTGTGCTCAG  
AACTGGATCTATGAATGCACAGGAGGGCAGACCACATTGCTTTTCACATCCATTCCCCTCCTTCCCATGGGCAGA  
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACTTCATCATAATTTGGAGGGAAGCTCTTGGAGCTGTGAG  
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAATGCTTCCTCCAGC

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**FIGURE 4890**

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHS GPVVA  
MVWEGLVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSCAQNWI  
YE

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**FIGURE 4891**

GACAACTTGAGCTGAAAGCGAAAACTATGCTGACCAGATTAGCAGACTTGAAGAAAGAGAAGCAGAACTGAAGA  
AGGAATATAATGCATTACATCAAAGACACACTGAGATGATCCATAATTATATGGAACATTTAGAAAGAACAAAAC  
TTCATCAGCTCTCAGGGAGTGATCAACTAGAATCCACAGCTCATAGTAGAATTAGAAAAGAACGCCCTATATCAT  
TAGGAATTTTCCCATTACCTGCTGGAGATGGATTGCTTACACCTGATGCTCAGAAAGGAGGAGAGACCCCTGGAT  
CTGAGCAATGGAATTTTCAGGAATTAAGTCAACCACGTTCTCATACCAGCCTGAAGGATGAGCTTTCTGATGTTA  
GCCAAGGCGGATCTAAAGCTACCACTCCAGCATCAACAGCTAATTGAGATGTGGCAACAATTCCTACTGATACTC  
CCTTAAAGGAAGAAAACGAAGGATTTGTGAAGGTTACAGATGCGCCAAATAAATCAGAGATAAGCAAACACATTG  
AAGTACAGGTAGCCCAGGAACTAGAAATGTATCTACTGGCTCTGCTGAAAATGAAGAAAAGTCAGAAGTTCAAG  
CAATCATCGAATCTACTCCTGAGCTGGATATGGACAAAGATCTCAGTGGATATAAAGGTTCAAGCACTCCCACCA  
AAGGCATAGAGAACAAAGCTTTTGGATCGCAATACAGAATCTCTCTTGAAGAACTGTCTTCAGCTGGCTCAGGCC  
TAATAGGAGATGTGGATGAAGGAGCAGATTTACTAGGAATGGGTGCGGAAGTTGAGAATCTTATATTAGAAAATA  
CACAACCTGTTGGAAACCAAAAATGCTTTGAACATAGTGAAGAATGATTTGATAGCAAAAGTGGATGAAGTACCT  
GTGAGAAAGATGTGCTGCAAGGGGAATTGGAGGCTGTGAAGCAAGCCAACTGAACTAGAGGAAAAGAACAGAG  
AATTGGAGGAAGAGCTTAGGAAAGCTCGGGCAGAAGCTGAAGATGCAAGGCCAAAAGCAAAAGATGACGATGATA  
GTGATATTCCCACAGCCCAGAGGAAACGGTTTACTAGAGTAGAAATGGCCCGTGTCTCATGGAGCGAAACCAGT  
ATAAAGAGAGATTGATGGAGCTTCAGGAAGCTGTTGATGGACAGAGATGATTCGGGCATCAGGAGAAAATCCAG  
CCATGCGAGGAAAAAAAAGGTCAAGCATTGGCAGTTTTTTCAGCCGACTTTTCAGCTCCTCAAGTAACACGACTA  
AGAAGCCTGAACCACCTGTTAATCTGAAGTACAATGCACCCACGCTCTCATGTTACTCCGTCCGTCAAGAAAAGAA  
GCAGCACCTTATCTCAGCTCCCTGGGGATAAGTCCAAAGCCTTTGATTTCTTAGTGAAGAAACTGAAGCTAGTT  
TAGCCTCAGCGAGAGAACAAAAGAGAGAGCAGTATCGTCAGGTAAAAGCACATGTTGAGAAGGAAGACGGTAGAG  
TGCAGGCTTTTGGCTGGAGTCTGCCTCAGAAGTACAAACAGGTAAACCAATGGTCAAGGTGAAAATAAGATGAAAA  
ATTTACCTGTGCCTGTCTATCTCAGACCTCTGGATAAAAAAGATACATCAATGAAGCTGTGGTGTGCTGTTGGAG  
TCAATTTATCTGGTGGGAAGACCAGAGATGGTGGTTCTGTTGTTGGAGCAAGTGTATTTTACAAGGATGTTGCTG  
GTTTGGATACAGAAGGCAGTAAACAGCGAAGTGCCTCTCAGAGTAGTTTAGATAAGTTAGATCAGGAACCTTAAGG  
AACAGCAGAAGGAGTTAAAAAATCAAGAAGAATTATCCAGTCTAGTTTGGATCTGTACCAGCACTCATTCGGCTA  
CAAAAGTTCTTATTATTGATGCTGTTCAACCTGGCAACATCCTAGACAGTTTCACTGTTTGCAACTCTCATGTTT  
TGTGATTGCAAGTGTGCCAGGTGCACGAGAAACAGACTACCTGCAGGAGAAGATCTTTCAGAATCTGGTCAGG  
TAGACAAAGCATCTTTATGTGGAAGTATGACAAGCAACAGCTCAGCAGAGACAGACAGCCTGTTAGGAGGCATCA  
CAGTGGTTGGTTGTTCTGCAGAAGGTGTGACGGGAGCTGCCACTTCCCCTAGTACAAATGGTGCTTCTCCAGTGA  
TGGATAAACACCAGAAATGGAAGCAGAAAATAGTGAGGTTGATGAAAATGTTCCAACAGCAGAAGAAGCAACTG  
AAGCTACAGAAGGGAATGCGGGGTGAGCTGAAGACACAGTGGACATCTCCCAAACCTGGCGTCTACACAGAGCATG  
TCTTTACAGATCCTTTGGGAGTTCAGATCCCAGAAGACCTCTCCCAGTGTATCAGTCGAGGTATAATAATGGGT  
CATCAACTTAGGCAACTGGGTGAAGTGCACAAATAAAGGAACCAAAATAATCTCAAACAGTCAAAAGATTTC  
CTAATTAGTGTCACTGTGGTGGATTAAAAGATACCTATTCTTGTGATA

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**FIGURE 4892**

MIHNYMEHLERTKLHQLSGSDQLESTAHSRIRKERPISLGIFPLPAGDGLLTPDAQKGGETPGSEQWKFQELSQP  
RSHTSLKDELSDV SQGSKATTPASTANS DVATIPTDTPLKEENEGFVKVTDAPNKSEISKHIEVQVAQETRNVS  
TGSAENEEKSEVQAI IESTPELDMDKDLSGYKGSSTPTKGIENKAFDRNTESLFEELSSAGSLIGDVDEGADLL  
GMGREVENLILENTQLLETKNALNIVKNDLIAKVDELTCEKDV LQGELEAVKQAKLKLEKNRELEEEELRKARAE  
AEDARQKAKDDDDSDIPTAQRKRFTRVEMARVLMERNQYKERLMELQEAVRWTE MIRASREN PAMQEKKRSSIWQ  
FFSRLFSSSSNTTKPEPPVNLKYNAPTSHVTPSVKKRSSTLSQLPGDKSKAFDFLSEETEASLASRREQKREQY  
RQVKAHVQKEDGRVQAFGWSLPQKYKQVTNGQGENKMKNL PVPVYLRPLDKKDTSMKLWCAVG VNLSSGGKTRDGG  
SVVGASVFYKDVAGLDTEGSKQRSASQSSLDKLDQELKEQQKELKNQEELSSLVWICTSTHSATKVLIIIDAVQPG  
NILDSTVCNSHVLCIASVPGARETDYPAGEDLSESGQVDKASLCGSMTSNSSAETD SLLGGITVVGCSAEGVTG  
AATSPSTNGASPVMDKPPEMEAEENSEVDENVPTABEATEATEGNAGSAEDTVDISQTGVYTEHVFTDPLGVQIPE  
DLSPVYQSRYNNGSST

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**FIGURE 4893A**

CTCCGGCGCCCGCTCTGCCCGCCGCTGGGTCCGACCGCGCTCGCCTTCCTTGACGCCGCGCCTCGGCCCCATGGA  
CGCCCTGTGCGGTTCGCGGGAGCTCGGCTCCAAGTTCTGGGACTCCAACCTGTCTGTGCACACAGAAAACCCGGA  
CCTCACTCCCTGCTTCCAGAACTCCCTGCTGGCCTGGGTGCCCTGCATCTACCTGTGGGTGCGCCTGCCCTGCTA  
CTTGCTCTACCTGCGGCACCATTTGTCGTGGCTACATCATCTCTCCACCTGTCCAAGCTCAAGATGGTCTGCGG  
TGTCTGTGTGGTGCCTCTCCTGGGCGGACCTTTTTTACTCCTTCCATGGCCTGGTCCATGGCCGGGCCCCCTGC  
CCCTGTTTTCTTTGTACCCCCCTTGGTGGTGGGGGTACCATGCTGCTGGCCACCCTGCTGATACAGTATGAGCG  
GCTGCAGGGCGTACAGTCTTCGGGGGTCTCATTATCTTCTGGTTCTGTGTGGTCTGCGCCATCGTCCATT  
CCGCTCCAAGATCCTTTTAGCCAAGGCAGAGGGTGAGATCTCAGACCCCTTCGCTTCACCACCTTCTACATCCA  
CTTTGGCCTGGTACTCTCTGCCCTCATCTTGGCCTGCTTACGGGAGAAACCTCCATTTTTCTCCGCAAAGAATGT  
CGACCTTAACCCCTACCTGAGACCAGCGCTGGCTTTCTCTCCCGCTGTTTTCTGGTGGTTACAAAGCTGCT  
AAACCTTGACCTCTGCGGGGCTGCCTGCGGGCTTACCTCCCCCAGGATGGCCATCTATGGCTACCGGCATC  
CCCTGGAGGAGAAGGACCTCTGGTCCCTAAAGGAAGAGCAGATCCAGATGGTGGTGCAGCAGTCTGCTGGAGG  
CATGGAGGAAGCAGGAAAAGCAGACGGCACGACAAAGGCTTCAGCAGCACCTGGGAAAAATGCCTCCGGCGAGG  
ACGAGGTGCTGCTGGGTGCCCGGCCAGGCCCGGAAGCCCTCCTTCCTGAAGGCCCTGCTGGCCACCTTCGGCT  
CCAGCTTCCTCATCAGTGCTGCTTCAAGCTTATCCAGGACCTGCTCTCCTTCATCAATCCACAGCTGCTCAGCA  
TCCTGATCAGGTTTTATCTCCAACCCCATGGCCCCCTCCTGGTGGGGCTTCCTGGTGGCTGGGTGATGTTCTGT  
GCTCCAIGATGCAGTCGCTGATCTTACAACACTATTACCACTACATCTTTGTGACTGGGGTGAAGTTTCGTA  
GGATCATGGGTGTCATCTACAGGAAGGCTCTGGTTATACCAACTCAGTCAAACGTGCGTCCACTGTGGGGGAAA  
TTGTCAACCTCATGTGAGTGGATGCCAGCGCTTCATGGACCTTGCCCCCTTCCTCAATCTGCTGTGGTTCAGCAC  
CCCTGCAGATCATCCTGGCGATCTACTTCTCTGGCAGAACCTAGGTCCCTCTGTCTGGCTGGAGTTCGCTTTCA  
TGGTCTTGCTGATTCCACTCAACGGAGCTGTGGCCGTGAAGATGCGCGCCTTCCAGGTAAAGCAAATGAAATTGA  
AGGACTCGCGCATCAAGCTGATGAGTGAATCCTGGACGGCATCAAGGTGCTGAAGCTGTACGCTGGGAGCCCA  
GCTTCTGAAGCAGGTGGAGGGCATCAGGCAGGGTGAGCCCCAGCTGCTGCGCACGGCGGCCTACCTCCACACCA  
CAACCACCTTCACCTGGATGTGCAGCCCCCTTCCTGGTGACCTGATCACCCTCTGGGTGTACGTGTACGTGGACC  
CAAACAATGTGCTGGACGCCGAGAAGGCCTTTGTGCTGTGTCTTGTGTTTAAATATCTTAAGACTTCCCTCAACA  
TGCTGCCCCAGTTAATCAGCAACCTGACTCAGGCCAGTGTGTCTCTGAAACGGATCCAGCAATTCTGAGCCAAG  
AGGAACCTGACCCCCAGAGTGTGAAAGAAAGACCATCTCCCCAGGCTATGCCATCACCATAACAGTGGCACCT  
TCACCTGGGCCAGGACCTGCCCCCACTCTGCACAGCCTAGACATCCAGGTCCCGAAAGGGGCACTGGTGGCCG  
TGGTGGGGCCTGTGGGCTGTGGGAAGTCTCCCTGGTGTCTGCCCTGCTGGGAGAGATGGAGAAGCTAGAAGGCA  
AAGTGCACATGAAGGGCTCCGTGGCCTATGTGCCCCAGCAGGCATGGATCCAGAACTGCACCTTTCAGGAAAACG  
TGCTTTTCGGCAAAGCCCTGAACCCCAAGCGCTACCAGCAGACTCTGGAGGCCTGTGCCTTGCTAGCTGACCTGG  
AGATGCTGCTGGTGGGGATCAGACAGAGATTGGAGAGAAGGGCATTAACTGTCTGGGGGCCAGCGGCAGCGGG  
TCAGTCTGGCTCGAGCTGTTTACAGTATGCGCATATTTCTTGTGCTGGATGACCCACTGTCCGCGGTGGACTCTC  
ATGTGGCCAAGCACATCTTTGACCACGTCATCGGGCCAGAAGGCGTGCTGGCAGGCAAGACGCGAGTGTGTTGA  
CGCACGGCATTAGCTTCCTGCCCCAGACAGACTTCATCATTGTGCTAGCTGATGGACAGGTGTCTGAGATGGGCC  
CGTACCCAGCCCTGCTGCAGCGCAACGGCTCCTTTGCCAACTTTCTCTGCAACTATGCCCCCGATGAGGACCAAG  
GGCACCTGGAGGACAGCTGGACCGCGTTGGAAGGTGCAGAGGATAAGGAGGCACTGCTGATTGAAGACACACTCA  
GCAACCACACGGATCTGACAGACAATGATCCAGTCACCTATGTGGTCCAGAAGCAGTTTATGAGACAGCTGAGTG  
CCCTGTCTCAGATGGGGAGGGACAGGGTCGGCCTGTACCCCGGAGGCACCTGGGTCCATCAGAGAAGGTGCAGG  
TGACAGAGGCGAAGGCAGATGGGGCACTGACCCAGGAGGAGAAAGCAGCCATTGGCACTGTGGAGCTCAGTGTGT  
TCTGGGATTATGCCAAGGCCGTGGGGCTCTGTACCACGCTGGCCATCTGTCTCCTGTATGTGGGTCAAAGTGGCG  
CTGCCATTGGAGCCAATGTGTGGCTCAGTGCCTGGACAAATGATGCCATGGCAGACAGTAGACAGAACAACACTT  
CCCTGAGGCTGGGCGTCTATGCTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGTGCTGGCAGCCATGGCCATGG  
CAGCGGGTGGCATCCAGGCTGCCCCGTGTGTGCACCAGGCACTGCTGCACAACAAGATACGCTCGCCACAGTCCT  
TCTTTGACACCACACCATCAGGCCGATCCTGAACTGCTTCTCCAAGGACATCTATGTCGTGATGAGGTTCTGG  
CCCCGTGCATCCTCATGCTGCTCAATTCCTTCTTCAACGCCATCTCCACTCTTGTGGTTCATCATGGCCAGCACGC  
CGCTCTTCACTGTGGTTCATCTGCCCTGGCTGTGCTCTACACCTTAGTGCAGCGCTTCTATGCAGCCACATCAC  
GGCAACTGAAGCGGCTGGAATCAGTCAGCCGCTCACCTATCTACTCCACTTTTCGGAGACAGTGAAGTGGTCCA

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**FIGURE 4893B**

GTGTCATCCGGGCTACAACCGCAGCCGGGATTTTGAGATCATCAGTGATACTAAGGTGGATGCCAACCAGAGAA  
GCTGCTACCCCTACATCATCTCCAACCGGTCAGAAGCGCCTCCCTCGCTCCCTGCTCCTCCAGGAATTCCCAGC  
AGGCTCTCTGGTGTTTCAGGGTCCTTGTCCTCCTTTCCCTAAGCAGAAAACGGCCCTGCCCTGCCCTGCCCT  
ATTTCTCCTCATCTGATCCCCATAGGTGGCTGAGCATCGGAGTGGAGTTEGTGGGGAACGCGTGGTGCTCTT  
TGCTGCACTATTTGCCGTCATCGGGAGGAGCAGCCTGAACCCGGGGCTGGTGGGCCTTTCTGTGTCTACTCCTT  
GCAGGTGACATTTGCTCTGAACTGGATGATACGAATGATGTCAGATTTGGAATCTAACATCGTGGCTGTGGAGAG  
GGTCAAGGAGTACTCCAAGACAGAGACAGAGGCGCCCTGGGTGGTGAAGGCAGCCGCCCTCCCGAAGGTGGCC  
CCCACGTGGGGAGGTGGAGTTCCGGAATTATTCTGTGCGCTACCGGCCGGGCCTAGACCTGGTGTCTGAGAGACCT  
GAGTCTGCATGTGCACGGTGGCGAGAAGGTGGGGATCGTGGGCCGCACTGGGGCTGGCAAGTCTTCCATGACCCT  
TTGCCTGTTCCGCATCCTGGAGGCGGCAAAGGGTGAAATCCGCATTGATGGCCTCAATGTGGCAGACATCGGCCT  
CCATGACCTGCGCTCTCAGCTGACCATCATCCCGCAGGACCCCATCCTGTTCTCGGGGACCCCTGCGCATGAACCT  
GGACCCCTTCGGCAGCTACTCAGAGGAGGACATTTGGTGGGCTTTGGAGCTGTCCACCTGCACACGTTTGTGAG  
CTCCAGCCCGGCAGGCCTGGACTTCCAGTGCTCAGAGGGCGGGGAGAATCTCAGCGTGGGCCAGAGGCAGCTCGT  
GTGCCTGGCCCGAGCCCTGCTCCGCAAGAGCCGCATCCTGGTTTTAGACGAGGCCACAGCTGCCATCGACCTGGA  
GACTGACAACCTCATCCAGGCTACCATCCGCACCCAGTTTGATACCTGCACTGTCCTGACCATCGCACACCGGCT  
TAACACTATCATGGACTACACCAGGGTCTGGTCTGGACAAAGGAGTAGTAGCTGAATTTGATTCTCCAGCCAA  
CCTCATTGCAGCTAGAGGCATCTTCTACGGGATGGCCAGAGATGCTGGACTTGCCTAAATATATTCCTGAGATT  
TCCTCCTGGCCTTTCTGGTTTTTCATCAGGAAGGAAATGACACCAAATATGTCCGCAGAATGGACTTGATAGCAA  
ACACTGGGGGCACCTTAAGATTTTGACCTGTAAAGTGCCTTACAGGGTAACTGTGCTGAATGCTTTAGATGAGG  
AAATGATCCCCAAGTGGTGAATGACACGCCTAAGGTACAGCTAGTTTGAGCCAGTTAGACTAGTCCCCCGGTCT  
CCCGATTCCCAACTGAGTGTTATTTGCACACTGCACTGTTTTCAAATAACGATTTTATGAAATGACCTCTGTCT  
CCCTCTGATTTTTTCATATTTCTAAAGTTTCGTTTCTGTTTTTAATAAAAAGCTTTTCTCCTGGAACAGAA  
GACAGCTGCTGGGTGAGGCCACCCCTAGGAACTCAGTCCTGTACTCTGGGGTGTGCCTGAATCCATTAAAAATG  
GGAGTACTGATGAAATAAACTACATGGTCAACAGTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4894**

MDALCGSGELGSKFWDNLSVHTENPDLTPCFQNSLLAWVPCIYLVWALPCYLLYLRRHCRGYIILSHLSKLMV  
LGVLLWCVSWADLFYSFHGLVHGRAPAPVFFVTPLVVGVTMLLATLLIQYERLQGVQSSGVLIIFWFLCVVCAIV  
PFRSKILLAKAEGEISDPFRFTTFYIHFALVLSALILACFREKPPFFSAKNVDPNPYPETSAGFLSRLFFWWFTK  
LLNPDPLRGCLPGFTSPQDGHLLWPASPGGEGPLVPKGRGQIPDGGAAAAGMEEAGKADGTTQGFSSWEKCLR  
RGRGAAGCPAQAPEALLPEGPAHGLRLQLPHQCLLQAYPGPALLHQSTAAQHDPQVYLQPHGPLLVLPGGWADV  
PVLHDAVADLTLLPLHLCDWGEVSYWDHGCHLQEGSGYHQLSQTVCVHCGGNCQPHVSGCPALHGPCPLPQSAVV  
STPADHPGDLLPLAEPRSLCPGWSRFHGLADSTQRSCGREDARLPGKANEIEGLAHQADE

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**FIGURE 4895A**

CTCCGGCGCCCGCTCTGCCCGCCGCTGGGTCCGACCGCGCTCGCCTTCCTTGCCAGCCGCGCCTCGGCCCCATGGA  
CGCCCTGTGCGGTTCCGGGGAGCTCGGCTCCAAGTTCTGGGACTCCAACCTGTCTGTGCACACAGAAAACCCGGA  
CCTCACTCCCTGCTTCCAGAACTCCCTGCTGGCCTGGGTGCCCTGCATCTACCTGTGGGTGCGCCCTGCCCTGCTA  
CTTGCTCTACCTGCGGCACCATGTCTGGGTACATCATCTCTCCACCTGTCCAAGCTCAAGATGGTCTGGG  
TGTCTGTGTGGTGCCTCTCTGGGCGGACCTTTTTTACTCCTTCCATGGCCTGGTCCATGGCCGGGCCCCCTGC  
CCCTGTTTTCTTTGTACCCCCCTTGGTGGTGGGGTACCATGTCTGGCCACCCTGTGATACAGTATGAGCG  
GCTGCAGGGCGTACAGTCTTCGGGGGTCTCTATTATCTTCTGGTTCTGTGTGTGGTCTGCGCCATCGTCCCATT  
CCGCTCCAAGATCCTTTTAGCCAAGGCAGAGGGTGAGATCTCAGACCCCTTCCGCTTACCACCTTCTACATCCA  
CTTTGCCCTGGTACTCTCTACCCTCATCTTGGCCTGCTTCAGGGAGAAACCTCCATTTTTCTCCGCAAGAATGT  
CGACCCTAACCCCTACCCTGAGACCAGCGCTGGCTTTCTCTCCCGCTGTTTTTCTGGTGGTTCACAAAGATGGC  
CATCTATGGCTACCGGCATCCCTGGAGGAGAAGGACCTCTGGTCCCTAAAGGAAGAGGACAGATCCAGATGGT  
GGTGCAGCAGCTGCTGGAGGCATGGAGGAAGCAGGAAAAGCAGACGGCAGCAGACACAAGGCTTCAGCAGCAGCTGG  
GAAAAATGCTCCGGCGAGGACGAGGTGCTGCTGGGTGCCCGGCCAGGCCCGGAAGCCCTCCTTCTGAAGGC  
CCTGCTGGCCACCTTCGGCTCCAGCTTCTCATCAGTGCCTGCTTCAAGCTTATCCAGGACCTGCTCTCCTTCAT  
CAATCCACAGCTGCTCAGCATCTGATCAGGTTTATCTCCAACCCCATGGCCCCCTCCTGGTGGGGCTTCCTGGT  
GGCTGGGCTGATGTTCTGTGCTCCATGATGCAGTGCCTGATCTTACAACACTATTACCACTACATCTTTGTGAC  
TGGGGTGAAGTTTCGTACTGGGATCATGGGTGTCATCTACAGGAAGGCTCTGGTTATCACCACCTCAGTCAAACG  
TGCGTCCACTGTGGGGGAAATTGTCAACCTCATGTGAGTGGATGCCAGCGCTTCATGGACCTTGCCCCCTTCTCT  
CAATCTGCTGTGGTACAGACCCCTGCAGATCATCTGGCGATCTACTTCTCTGGCAGAACCTAGGTCCCTCTGT  
CCTGGCTGGAGTGCCTTTTCATGGTCTTGCTGATTCCACTCAACGGAGCTGTGGCCGTGAAGATGCGCGCCTTCCA  
GGTAAAGCAAAATGAAATTGAAGGACTCGCGCATCAAGCTGATGAGTGAATCCTGAACGGCATCAAGGTGCTGAA  
GCTGTACGCTGGGAGCCCAGCTTCTGAAGCAGGTGGAGGGCATCAGGCAGGGTGAGCTCCAGCTGCTGCGCAC  
GGCGGCCTACCTCCACACCACAACACCTTCACCTGGATGTGCAGCCCTTCTGGTGAACCTGATACCCCTCTG  
GGTGTACGTGTACGTGGACCCAAACAATGTGTGACGCGGAGAAGGCCTTTGTGTCTGTGCTCTGTTAATAT  
CTTAAGACTTCCCTCAACATGCTGCCCCAGTTAATCAGCAACCTGACTCAGGCCAGTGTGTCTCTGAACGGAT  
CCAGCAATTCTGAGCCAAGAGGAACCTTGACCCCAAGAGTGTGGAAGAAAGACCATCTCCCCAGGCTATGCCAT  
CACCATACACAGTGGCACCTTCACCTGGGCCAGGACCTGCCCCCACTCTGCACAGCCTAGACATCCAGGTCCC  
GAAAGGGGCACTGGTGGCCGTGGTGGGGCTGTGGGCTGTGGGAAGTCTCCCTGGTGTCTGCCCTGTGGGAGA  
GATGGAGAAGCTAGAAGGCAAGTGCACATGAAGGGCTCCGTGGCCTATGTGCCCAAGCAGGCATGGATCCAGAA  
CTGCACTCTTCAGGAAAACGTGCTTTTCGGCAAAGCCCTGAACCCCAAGCGCTACCAGCAGACTCTGGAGGCCTG  
TGCCTTGCTAGCTGACCTGGAGATGCTGCCTGGTGGGGATCAGACAGAGATTGGAGAGAAGGGCATTAACTGTCT  
TGGGGGCCAGCGGCAGCGGGTCACTGCTGGCTCGAGCTGTTTACAGTGTATGCCGATATTTTCTTGCTGGATGACCC  
ACTGTCCGCGGTGGACTCTCATGTGGCCAAGCACATCTTTGACCAGCTCATCGGGCCAGAAGGCGTGTGGCAGG  
CAAGACGCGAGTGTGGTGACGCACGGCATTAGCTTCTGCCCCAGACAGACTTCATCATTGTGTAGCTGATGG  
ACAGGTGTCTGAGATGGGCCCTACCCAGCCCTGCTGCAGCGCAACGGCTCCTTTGCCAACCTTCTCTGCAACTA  
TGCCCCCGATGAGGACCAAGGGCACCTGGAGGACAGCTGGACCGCTTGAAGGTGCAGAGGATAAGGAGGCACT  
GCTGATTGAAGACACACTCAGCAACCACACGGATCTGACAGACAATGATCCAGTCACCTATGTGGTCCAGAAGCA  
GTTTATGAGACAGCTGAGTGCCCTGTCTCAGATGGGGAGGGACAGGGTGGCCCTGTACCCCGGAGGCACCTGGG  
TCCATCAGAGAAGGTGCAGGTGACAGAGGCGAAGGCAGATGGGGCACTGACCCAGGAGGAGAAAGCAGCCATTGG  
CACTGTGGAGCTCAGTGTGTTCTGGGATTATGCCAAGGCCGTGGGGCTCTGTACCACGCTGGCCATCTGTCTCCT  
GTATGTGGGTCAAAGTGCAGGTGCCATTGGAGCCAATGTGTGGCTCAGTGCCTGGACAAATGATGCCATGGCAGA  
CAGTAGACAGAACAACACTTCCCTGAGGCTGGGCGTCTATGCTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGTAT  
GCTGGCAGCCATGGCCATGGCAGCGGGTGGCATCCAGGCTGCCCCGTGTGTTGCACCAGGCACTGCTGCACAACAA  
GATACGCTCGCCACAGTCTTCTTTGACACCACACCATCAGGCCGCATCCTGAACTGCTTCTCCAAGGACATCTA  
TGTCTGTGATGAGGTTCTGGCCCCCTGTATCTCATGCTGCTCAATTCTTCTTCAACGCCATCTCCACTCTTGT  
GGTATCATGAGCCAGCAGCGGCTCTTCACTGTGGTCACTCTGCCCTGGCTGTGCTCTACACCTTAGTGACGCG  
CTTCTATGACCCACATCACGGCAACTGAAGCGGCTGGAATCAGTCAGCCGCTCACCTATCTACTCCCACTTTTC  
GGAGACAGTACTGGTGCCAGTGTCTATCCGGGCCCTACAACCGCAGCCGGGATTTTGAGATCATCAGTGATACTAA



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**FIGURE 4895B**

GGTGGATGCCAACCAGAGAAGCTGCTACCCCTACATCATCTCCAACCGGTCAGAAGCCGCCTCCCTCGCTCCCTG  
CTCCTCCAGGAATCCAGCAGGCTCTCTGGTGTTCAGGGTCCTTGTCCCTCCTTTCCCTAAGCAGAAAAGTGG  
CCCTGCCCTGCCCTGCCCATTTCTCTCTCATCTGATCCCCCATAGGCGGCTGAGCATCGGAGTGGAGTTCGTG  
GGGAAGTGCCTGGTGTCTTTGCTGCATATTTGCCGTCTCGGGAGGAGCAGCCTGAACCCGGGGCTGGTGGGC  
CTTTCTGTCTCTCTCTCTGAGGTGACATTTGCTCTGAAGTGGATGATACGAATGATGTGAGATTTGGAATCT  
AACATCGTGGCTGTGGAGAGGGTCAAGGAGTACTCCAAGACAGAGACAGAGGCGCCCTGGGTGGTGAAGGCAGC  
CGCCCTCCCGAAGGTTGGCCCCACGTGGGGAGGTGGAGTTCCGGAATTATTCTGTGCGCTACCGGCCGGGCTTA  
GACCTGGTGTGAGAGACCTGAGTCTGCATGTGCACGGTGGCGAGAAGGTGGGGATCGTGGGCCGCACTGGGGCT  
GGCAAGTCTTCCATGACCTTTGCCTGTTCCGCATCCTGGAGGCGGCAAAGGGTGAAATCCGCATTGATGGCCTC  
AATGTGGCAGACATCGCCTCCATGACCTGCGCTCTCAGCTGACCATCATCCCGCAGGACCCCATCTGTCTCTG  
GGGACCCTGCGCATGAACCTGGACCCCTTCGGCAGCTACTCAGAGGAGGACATTGGTGGGCTTTGGAGCTGTCC  
CACCTGCACACGTTTGTGAGCTCCAGCCGGCAGGCCTGGACTTCCAGTGCTCAGAGGGCGGGGAGAATCTCAGC  
GTGGGCCAGAGGCAGCTCGTGTGCTGGCCCCGAGCCCTGCTCCGCAAGAGCCGCATCTGGTTTTAGACGAGGCC  
ACAGCTGCCATCGACCTGGAGACTGACAACCTCATCCAGGCTACCATCCGCACCCAGTTTGATACCTGCACTGTC  
CTGACCATCGCACACCGGCTTAACACTATCATGGACTACACCAGGGTCTGGTCTGGACAAAGGAGTAGTAGCT  
GAATTTGATTCTCCAGCCAACCTCATTGCAGCTAGAGGCATCTTCTACGGGATGGCCAGAGATGCTGGACTTGCC  
TAAATATATTCCTGAGATTTCTCTGGCCTTTCTGTTTTTCATCAGGAAGGAAATGACACCAAATATGTCCG  
CAGAATGGACTTGATAGCAAACACTGGGGGCACCTTAAGATTTTGCACCTGTAAAGTGCCTTACAGGGTAACTGT  
GCTGAATGCTTTAGATGAGGAAATGATCCCCAAGTGGTGAATGACACGCCTAAGGTCACAGCTAGTTTGAGCCAG  
TTAGACTAGTCCCCCGGTCTCCCGATTCCCAACTGAGTGTTATTTGCACACTGCACTGTTTTCAAATAACGATTT  
TATGAAATGACCTCTGTCTCCCTCTGATTTTTTCATATTTTCTAAAGTTTCGTTTCTGTTTTTAATAAAAAGC  
TTTTTCCTCCTGGAACAGAAGACAGCTGCTGGGTGAGGCCACCCCTAGGAACTCAGTCTGTACTCTGGGGTGCT  
GCCTGAATCCATTAAAAATGGGAGTACTGATGAAATAAAACTACATGGTCAACAGTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4896**

MDALCGSGELGSKFWDSNLSVHTENPDLTFCFQNSLLAWVPCIYLLWVALPCYLLYLRRHCRGYIILSHLSKLMV  
LGVLLWCVSWADLFYSFHGLVHGRAPAPVFFVTPLVVGVTMLLATLLIYERLQGVQSSGVLIIFWFLCVVCAIV  
PFRSKILLAKAEGEISDPFRFTTFYIHFAVLVSTLILACFREKPPFFSAKNVDPNPYPETSAGFLSRLFFWWFTK  
MAIYGYRHPLEEKDLWSLKEEDRSQMVMVQQLLEAWRKQEKQTARHKASAAPGKNASGEDEVLLGARPRPRKPSFL  
KALLATFGSSFLISACFKLIQDLLSFINPQLLSILIRFISNPMAPSWWGFLVAGLMFLCSMMQSLILQHYYHYIF  
VTGVKFRGTIMGVIYRKALVITNSVKRASTVGEIVNLMSVDAQRFMDLAPFLNLLWSAPLQIILAIYFLWQNLGP  
SVLAGVAFMVLLIPLNGAVAVKMRAFQVKQMKLKDSRIKLMSEILNGIKVLKLYAWEPSFLKQVEGIRQGEQQLL  
RTAAYLHTTTTTFTWMCSPFLVTLITLWVYVYVDPNNVLDAAKAFVSVSLEFNILRLPLNMLPQLISNLTQASVSLK  
RIQQFLSQEELDPQSVERKTIISPGYAITIHSGTFTWAQDLPTLHSLDIQVPGALVAVVGPVCGKSSLSVALL  
GEMEKLEGKVHMKGSVAYVPQAWIQNCTLOENVLFKALNPKRYQQTLEACALLADLEMLPGGDQTEIGEKGIN  
LSGGQRQRVSLARAVYSDADIFLLDDPLSAVDSHVAKHIFDHVIGPEGVLAKTRVLVTHGISFLPQTDFIIVLA  
DGQVSEMGPYPALLQRNGSFANFLCNYPDEDQGHLEDSWTALEGAEDKEALLIEDTLNHTDLTDNDPVTYVVQ  
KQFMRQLSALSSDGEGQGRPVPRRHLGPSEKVQVTEAKADGALTQEEKAAIGTVELSVFWDYAKAVGLCTTLAIC  
LLYVGQSAAAIGANVWLSAWTNDAMADSRQNNTSLRLGVYAALGILQGFLVLAAMAMAAGGIQAARVLHQALLH  
NKIRSPQSFFDTTPSGRILNCFSKDIYVDEVLPVILMLLNSFFNAISTLVVIMASTPLFTVVILPLAVLYTLV  
QRFYAATSRQLKRLESVSRSPIYSHFSETVTGASVIRAYNRSRDFEIIISDTKVDANQRSCYPYIISNRSEAASLA  
PCSSRNSQQALWCSSLSLLSPKQKTGPALPLPHFLLI

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**FIGURE 4897**

GTGCTGCCTGGCGCTGGCTAGGAGGCAAACGCACGCGGGAAGAGCTGCTACCCATTCCAGGGACCCTGCCGCTGC  
CCCTCTGAGGGGTCTGCACCTCCTGGGAGCAGGTGGGTCTCTGGGACGAGGGTCCATGGTGGATGGCTCTGGAGA  
CGCTCCCGAGGCTGTGCCGTCCCGCTGCTGCACAGGTCCGAGGGTACCGCAGAGGGCTACTCGGGCTGGGGCTGG  
GGCCGAGGGAGCCCGCACTGGAGCCCCATGTGGAACCAAGGATGCAGCTGCTCTGCTAACACGGCAGCCCATCC  
TTCAAGACTGTGACCTCGCCACAGTGGCCCTCAGCCCTCCACCTCCGGCGGGGGCGAGGGCCACCCACCTCCAAG  
TCTCCAGCCATGACGACCTCCGCACTCCGGCGCCAGGTGAAGAACATCGTGCACAACTACTCCGAGGCAGAAATC  
AAGGTGCGCGAGGGCCACAGCAATGACCCCTGGGGCCCCCTAGTTTCGCTCATGTCCGAGATCGCTGACCTGACC  
TTCAACACAGTGGCCTTACC GAAGTCA TGGGCATGTCTGGCGGGCTCAATGACAGCGGCAAGAAGTGGCGG  
CACGTGTACAAGGCTTAACATTGCTGGACTACCTGTCTAAGACGGGCTCCGAGCGGGTGGCCACCAAGTGGCGC  
GAGAACCTCTACACCATCCAGACACTCAAGGACTTCCAGTACATCGACCGGACGGAAGGACCAAGGGCGTCAAC  
GTGCGCGAGAAGGTCAAGCAGGTGATGGCCCTGCTCAAGGATGAGGAGCGGCTGCGGCAGGAGCGAACCACGCC  
CTCAAGACCAAGGAGCGCATGGCACTGGAGGGCATCGGCATTGGCAGTGGGCAGCTGGGCTTACGCCCGCTAC  
GGCGAGGACTACAGCCGCTCCCGGGGCTCCCCGTCTCTACAACCTCTCTCTTCGTCACCCGCTATACCTCC  
GACCTGGAGCAGGCCCGGCCCTCAGACGTGAGGGGAAGAGGAAGTGCAGCTGCAGCTGGCCCTCGCCATGAGCCGT  
GAGGAGGCAGAGAAGCCTGTCCCCCAGCCTCCACAGGGACGAGGACCTGCAGCTGCAGCTGGCTCTGCGCCTG  
AGCCGGCAGGAGCACGAGAAGGAGGTGAGGTCTGGCAGGGTGATGGTCCCCCATGGCCAATGGTGCAGGGGCC  
GTGGTCCACCATCAGCGGGACAGAGAGCCTGAGAGAGAAGAGAGAAAGGAGGAGGAGAAGCTAAAAACCAGCCAG  
TCCTCCATCCTGGACTTGGCTGACATCTTCGTACCTGCCCTGGCCCCGCCCTCCACACACTGCTCTGCTGACCCA  
TGGGACATCCCAGGTTTTAGGCCGAACACAGAGGCCAGTGGATCCTCCTGGGGGCCCTTCTGCAGACCCCTGTCT  
CCGATCCCCCTCAGGAACCGTCTGTCCCGAAGCCAGCCCTGGGATCTGACTCCCATGCTCTCTCTCTGAGCCC  
TGGGGCAGGACCCCACTGCTGCCTGCTGGGCCCCCACCACAGACCCCTGGGCCCTGAACCTCTCCCCACCACAAA  
CTCCCCAGCACTGGGGCTGACCCTTGGGGAGCCTCCCTGGAGACCTCCGACACACCTGGTGGTGCCTCGACCTTT  
GACCCATTTGCCAAACCTCCAGAATCCACAGAGACCAAGGAGGGGCTGGAGCAGGCCCTGCCCTCTGGGAAGCCC  
AGCAGCCCTGTGGAGCTGGACCTGTTTGGAGACCCAGCCCCAGTTCCAAGCAAAATGGCAGGAAGGAGCCAGAT  
GCCCTGGACCTGGGCATACTAGGGGAAGCACTAACCCAGCCAAGCAAGAGGCCCGAGCTTGCCGGACTCCCGAG  
TCCTTCTGGGTCCCTCAGCTTCCCTCTTGGTCAACCTTGACTCGTTGGTCAAGGCACCCAGGTTGCAAAGACC  
CGGAACCCCTTCTGACAGGTCTCAGCGCTCCGTCCCCACCAACCCGTTTCGGCGCGGGCGAGCCGGGCAGGCCG  
ACGCTAAACCAGATGCGCACCGGCTCGCCGGCGCTGGGCCTGGCAGGCGGGCCTGTGGGGGCGCCCTGGGCTCC  
ATGACCTACAGCGCCTCTCTGCCCCCTCCCGCTCAGCAGCGTGCCAGCTGGCTTGACCTCCCCGCCTCGGTTAGC  
GTCTTCCCGCAGGCCGGAGCCTTCGCACCGCAGCCGTGCTGCCACGCGGAGCTCAGCCGGGCGCGGCCCGCG  
CCCCCGCAGACCGGCACCAACCCCTTCTCTGAGCCCCGCCCCGTCCCATACCGGCTGCGCCTGCGCCGGACGC  
TCCGCGGCCCGCCTCCGGACCCGGGGCTGGGCGGGGCGCCGGTGCTAGTGGAACGCCGAGCCAGTGGCGGCTGG  
TATCCCGCGGGCGGCTCTGGAAGCTGGACGCGGACCACGGCCCGGGAGCTAGAACTGAACGCCCGCATAATAAAG  
ACTGGAACCTCGTTCTCAGCTCTCACCAAGTGGACTTTTGGGGGTGTGGCGGCCGGGTCTCGACCACAGCGT  
GGATCACCGGCTGTTTAGGAACTGCAGCTGCACAACGTGGGGTGCAAACTGCCCCGCTTCTTTACAGCTCTT  
CTCAACCTCACCTCCATCCCCGTACCCAGGCACCTTCGCTTCCAGATGCTGCCAGGCTGTCACTCAATTCGG  
TCATTTCAATTCATTTATCACACATGGGCACTGGGGTGGGCTAACAGCAAGAGACAATAGGCCCTTTGTTCTATT  
TATTGGGTACTGCTTACGTGCTAAGCAGATCAGTTTATTTAATGCTTGCAACGACTCTCTGAGGTAGAAAATATT  
GTTAATTCCGTTCCAGGATCCCGGCTACATAATCTGTGGGGCTCAATACAAAATAAAAATGTAGGGGCTCCTTGT  
C

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**FIGURE 4898**

GTGATCCCTGCGCGCTCTCCTGCTCGGGTCAGTGCGCCGCGCTGCGCTGGGCGCC**ATGG**CGCTCCCCGGAGCCC  
GGGCTCGCGGCTGGGCGGCAGCAGCCAGAGCGGCCAGAGGCGCCGCCGCTGGAGAACGCAGGAGGGTCCCCGA  
GTCTGAGCCTGCGGGCCGGCGCGCGGCGCTTTACGTACACTGGCCTTACTGCGAGAAGCGCTGCAGTTACTGCA  
ACTTCAACAAGTACATCCCTCGCGCCTGGAGGAGGCTGCCATGCAGAAGTGTCTGGTGACCGAAGCTCAGACGC  
TGCTGCGGCTCAGCGGGGTGCAACGGGTGGAGTCTGTGTTCTTTGGTGGGGGGACCCCCAGTCTAGCCAGTCCCC  
ACACGGTGGCTGCTGTCTGGAGGCTGTGGCACAGGCAGCCACCTGCCTGCAGACTTGGAAGTCACATTGGAGG  
CTAATCCTACTTCAGCTCCGGGCTCCAGACTGGCAGAGTTGGGGCAGCAGGGGTAAACAGGTTGTCTATAGGCC  
TCCAGTCCCTAGATGACACTGAGCTCCGGCTGTTGGGACGGACGCACTCGGCCTGCGATGCTCTGCGGACGCTGG  
CAGAGGCCCCGGCGCCTCTTTCCCGGGCGCGTGTCTGTAGACTTGATGCTGGGGCTGCCGGCACAGCAGGTGGGGC  
CGTGGCTTGGGCAGCTGCAGGAACCTGCTGCACCACTGTGATGACCACCTCTCCCTCTACCAGTGTCCCTGGAGC  
GGGGCACCGCACTCTTCGCCCAGGTGCAGCGGGGTGCCCTTCCAGCCCCTGACCCGGAGCTCGCAGCTGAGATGT  
ACCAGAGGGGCCGGGCTGTCTTCGGGAGGCTGGCTTCCACCAGTATGAGGTCTCCAACCTTTGCCCGGAATGGGG  
CGCTCAGTACCCACAATTGGACTTACTGGCAGTGTGGTCACTACCTTGGCGTTGGGCTGGGGCCCATGGACGAT  
TTATGCCCCAGGGGGCTGGAGGCCACACCCGGGAGGCTCGGATCCAGACACTGGAGCCTGACAACCTGGATGAAGG  
AGGTGATGCTGTTTGGCCATGGCACCCGGAAGCGTGTCCCCCTGGGCAGGCTGGAGCTGCTGGAGGAAGTTTGG  
CCCTGGGGCTACGCACCGATGTGGGGATCACTACCAGCACTGGCAGCAGTTTGAGCCCCAGCTGACCCTGTGGG  
ATGTGTTTGGAGCGAACAAGGAGGTGCAGGAGCTGCTGGAGCGGGCCTACTGCAGCTGGATCACAGGGGTCTTC  
GGTGTCTCTGGGAGGGTCTGGCTGTGCTGGACTCTCTCTTGTGCTGACCCTCCTGCCTCAGCTCCAAGAAGCCTGGC  
AGCAGAGAACCCCTCCCTGTGCCAGGAGGAT**GAC**AAAAATGTTCTGTGTTCCAGGGTAATGCCAGGTGGGT  
TTGAGAGCTGGGTCCGTACTGCAGACATCTCTCTCCGTTGTGGGTGCCGTCTCTGCTCCTTGTGGTTATTGCT  
CAGCCCTGGCATCCCCAGGGGAATGGCAGCAGTGAGGTAGATGGGAGGACATTTCTGGTCAGGGAACCTGGCATCC  
CATTACAGATCTCAGGACTCACAGGCCAACATGTGTTCCATGGCTGGGAATTGCCTACCACCCACATCAGCTTCT  
GTTTACCTTTTTGGCATCAAATAATGAACAGTGTGTTGGAATCTTTCTACAGGCAATTACCTCCCCAAGAGAAGC  
CTTCCTTATTTTGGAGTAAGGTCCTAAGATAGCTGGATGAATCAGGAAAACCATGTCCCCTCTAGGTATTATTAA  
TATTAGCAGGAAGGGATCTACTATAGGAATGAAGTATTTATAAACCCTGAAAGGGATAGAGAAGTGAACATTGG  
AGAAAGCCAGTAGCAACTGTGAGAAATCAGCAACTTGCAAGGAGGCACAGAAAACCTCCTGCTGATGGTCTCAGCTT  
CCAGCAGCACAAAAGCAGATGATGTACTGGAAAATGCTCAGAAGATGCTACAAAACCTCATGCCTACTGTCTGCC  
ACTGCTGGAGAAGGAATCATGGTTTCTAGAAGTGCTCTCATTAGTGGACTTTAAAGCAAATCCTGGCTGGCAGG  
AAATCTGAGGAATATAGCTCTTAGGCTTCCAGCCTCTACCATGCAGGAGAGAACACAGAAGGACTGATGTATGT  
TGGTGGATCCATGTATGTGTCCAGCACAGCGGCCTGCTGGACTCTGAGAACTGGGAAAGATCAGAGCAAGCCTTG  
CCTCTTATCTTCGGGAAACCAGAATATGTTGGGGTGGTAGGAGCCACACAGACTCTTCTGAGCCCCCTCACTCA  
CTTCCTTCCCCCTGTGCCTTTCCTTTGAGAGTGAAGGTGGGTGGAGTTGACCAGAGAAAGGGGAGAGAATTGCGG  
AAAGACCCAAAGTGTGTAATTCTTTGTCTTTTACCTACAGAAATGGTCACATGGTTCTATTAAATAGC  
CTAATAAACACATCTGGAGCCTGT

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**FIGURE 4899**

MALPGARARGWAAAAAAQRRRRVENAGGSPSPEPAGRRAALYVHWPYCEKRCSYCNFNKYIPRRLEEAAMQKCL  
VTEAQTLRLRLSGVQRVESVFFGGGTPSLASPHTVAAVLEAVAQAAHLPADLEVTLLEANPTSAPGSRLAEFGAAGV  
NRLSIGLQSLDDTELRLGRTHSACDALRTLAEARRLFPGRVSVDLMLGLPAQQVGPWLGGQLQELLHHCDDHLSL  
YQLSLERGTLFAQVQRGALPAPDPELAAEMYQRGRAVLREAGFHQYEVSNFARNGALSTHNWTYWQCGQYLGVG  
PGAHGRFMPQGAGGHTREARIQTLEPDNWMKEVMLFGHGTRKRVPLGRLELLEEVLAALGLRTDVGITHQHWQQFE  
PQLTLWDVFGANKEVQELLERGLQLDHRGLRCSWEGLAVLDSLLLTLPLQEQEAWQQRTPSPVPGG

[illegible]

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**FIGURE 4901**

MKAVQADQERERQRRLEVEREAEKKREAKQRAKEAQERELRKREKAEKERRRKEYDALKAAKREQEKKPKKEAN  
QAPKSKSGSRPRKPPPRKHTRSWAVLKLLLLLLFGVAGGLVACRVTELQQQPLCTSVNTIYDNAVQGLRRHEIL  
QWVLQIDSQQ

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## FIGURE 4902A

AGGTGAACAGGTCCTCACGCCCAGCTCCGCGCCCTCACGCGCTCTCGCCGGGACCCCGCTTCCGCTGGCAGCCAT  
GGGCCCCGCCCCAGCCGCGCGCCCCGCGCCCCACGCTGATGCTCTGTGCGCTCGCCTTGATGGTGGCGGCCGG  
CGGCTGCGTCTGCTCCGCTTCAACCTGGATACCCGATTCTGGTAGTGAAGGAGGCCGGGAACCCGGGCAGCCT  
CTTCGGCTACTCGGTGCGCCCTCCATCGGCAGACAGAGCGGCAGCAGCGCTACCTGCTCTGGCTGGTGGCCCCCG  
GGAGCTCGCTGTGCCCCGATGGCTACACCAACCGGACTGGTGCTGTGTACCTGTGCCCCACTACTGCCCCACAAGGA  
TGACTGTGAGCGGATGAACATCACAGTGAAAAATGACCTGGCCATCACATTATTGAGGACATGTGGCTTGGAGT  
GACTGTGGCCAGCCAGGGCCCTGCAGGCAGAGTTCTGGTCTGTGCCACCCTACACCCAGGTGCTGTGGTCAGG  
GTCAGAAGACCAGCGCGCATGGTGGGCAAGTGCTACGTGCGAGGCAATGACCTAGAGCTGGACTCCAGTGATGA  
CTGGCAGACCTACCACAACGAGATGTGCAATAGCAACACAGACTACCTGGAGACGGGCATGTGCCAGCTGGGCAC  
CAGCGGTGGCTTACCCAGAACACTGTGTACTTTCGCGCCCCCGGTGCCTACAACCTGGAAAGGAAACAGCTACAT  
GATTCAGCGCAAGGAGTGGGACTTATCTGAGTATAGTTACAAGGACCCAGAGGACCAAGGAAACCTCTATATTGG  
GTACACGATGCAGGTAGGCAGCTTCATCCTGCACCCCAAAAACATCACCATTGTGACAGGTGCCCCACGGCACC  
ACATATGGGCGCGGTGTCTTGTGAGCCAGGAGGAGGCGGAGACCTGCGGAGGAGGCAGGTGCTGGAGGGCTC  
GCAGGTGGGCGCCTATTTTGGCAGCGCCATTGCCCTGGCAGACCTGAACAATGATGGGTGGCAGGACCTCTGGT  
GGGCGCCCCCTACTACTTCGAGAGGAAAGAGGAAGTAGGGGGTGCCATCTATGTCTTCATGAACCAGGCGGGAAC  
CTCCTTCCCTGCTACCCCTCACTCTTCTTCATGGCCCCAGTGGCTCTGCTTTGGTTTATCTGTGGCCAGCAT  
TGGTGACATCAACCAGGATGGATTTTCAAGATATTGCTGTGGGAGCTCCGTTTGAAGGCTTGGGCAAAGTGTACAT  
CTATCACAGTAGCTCTAAGGGGCTCCTTAGACAGCCCCAGCAGGTAATCCATGGAGAGAAGCTGGGACTGCCTGG  
GTTGGCCACCTTCGCTATTCCCTCAGTGGGCAGATGGATGTGGATGAGAACTTCTACCCAGACCTTCTAGTGGG  
AAGCCTGTGACACCATTGTGCTGCTGCAGGGCCCCGGCCGTCATCAACATCGTCCACAAGACCTTGGTGGCCA  
GGCCAGCTGTGCTGGACCCTGCACCTTTCACGCGCCACCTCTGTGTGCAAGTGGAGCTGTGCTTGTCTTACAACC  
AGAGTGCCGGGAACCCCACTACAGGCGAAACATCACCTGGCCTACACTCTGGAGGCTGACAGGGACCGCCGGC  
CGCCCCGGCTCCGCTTTGCCGGCAGTGAGTCCGCTGTCTTCCACGGCTTCTTCTCCATGCCGAGATGCGCTGCC  
AGAAGCTGGAGCTGCTCCTGATGGACAACCTCCGTGACAACTCCGCCCCATCATCTCCATGAACCTACTCTT  
TACCTTTGCGGATGCCCGATGCCCCCCGGCTGGGGCTGCGGTCCCTGGACGCTACCCGATCTCAACCAGGCAC  
AGGCTCTGGAGAACCACACTGAGGTCCAGTTCAGAAAGGAGTGGGGCTGACAACAAGTGTGAGAGCAACTTGC  
AGATGCGGGCAGCCTTCGTGTGAGAGCAGCAGAGAAGCTGAGCAGGCTCCAGTACAGCAGAGACGTCCGGAAT  
TGCTCCTGAGCATCAACGTGACGAACACCCGACCTCGGAGCGCTCCGGGAGGACGCCCACGAGCGCTGCTCA  
CCCTGGTGGTGCCTCCCGCCTGCTGCTGTCTCAGTGCAGCCCCCGGGGCTGCCAAGCTAATGAGACCATCT  
TTTGGAGCTGGGGAACCCCTTCAAACGGAACAGAGGATGGAGCTGCTCATCGCCTTTGAGGTATCGGGGTGA  
CCCTGCACACAAGGGACCTTCAGGTGCAGCTGCAGCTCTCCACGTGAGTACCAGGACAACCTGTGGCCCATGA  
TCCTCACTCTGCTGGTGGACTATACACTCCAGACCTCGCTTAGCATGGTAAATACCCGGCTACAAAGCTTCTTTG  
GGGGGACAGTGATGGGTGAGTCTGGCATGAAAAGTGTGGAGGATGTAGGAAGCCCCCTCAAGTATGAATTCCAGG  
TGGGCCCCAATGGGGGAGGGCTGGTGGGCCTGGGGACCCTGGTCTAGGTCTGGAGTGGCCCTACGAAGTCAGCA  
ATGGCAAGTGGCTGCTGTATCCACGGAGATACCCGTCCATGGCAATGGGTCTGGCCCTGCCGACCACCTGGAG  
ACCTTATCAACCCTCTCAACCTCACTCTTCTGACCCTGGGGACAGGCCATCATCCCCACAGCGCAGGCGGCGAC  
AGCTGGATCCAGGGGAGGCCAGGGCCCCCACCCTGTCACTCTGGCTGCTGCCAAAAAGCCAAGTCTGAGACTG  
TGCTGACCTGTGCCACAGGGCGTGCCACTGTGTGTGGCTAGAGTGCCCCATCCCTGATGCCCCGTTGTACCA  
ACGTGACTGTGAAGGCACGAGTGTGGAACAGCACCTTCATCGAGGATTACAGAGACTTTGACCGAGTCCGGGTAA  
ATGGCTGGGCTACCCTATTCTCCGAACCAGCATCCCCACCATCAACATGGAGAACAAGACCAGTGGTCTCTGTG  
TGGACATTGACTCGGAGCTGGTGGAGGAGTCCGGCCGAAATCGAGCTGTGGCTGGTGTGGTGGCCGTGGGTG  
CAGGGCTGCTGCTGCTGGGGCTGATCATCCTCTGCTGTGGAAGTGTGACTTCTTAAAGCGGACCCGCTATTATC  
AGATCATGCCAAGTACCACGAGTGGGATCCGGGAGGAGGAGCGCTACCCACCTCCAGGGAGCACCTGCCCA  
CCAAGAAGCACTGGGTGACCAGCTGGCAGACTCGGGACCAATACTACTGACGTCTCCCTGATCCCAACCCCTCC  
TCCCCAGTGTCCCCTTTCTCTCTATTATCATAAGTTATGCCTCTGACAGTCCACAGGGGCCACCCTTTGGC  
TGGTAGCAGCAGGCTCAGGCACATACACCTCGTCAAGAGCATGCATGCTGTCTGGCCCTGGGGATCTTCCAC  
AGGAGGGCCAGCGCTGTGGACCTTACAACGCCGAGTGCATGCTTCTGTGCCCTAGATGCAGTGGGGCCAC  
TGCTCGTGGACTGTGCTGGTGCATCACGGATGGTGCATGGGCTCGCCGTGTCTCAGCCTCTGCCAGCGCCAAAAAC



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**FIGURE 4902B**

AAGCCAAAGAGCCTCCCACCAGAGCCGGGAGGAAAAGGCCCTGCAATGTGGTGACACCTCCCCCTTTCACACTG  
GATCCATCTTGAGCCACAGTCACTGGATTGACTTTGCTGTCAAACTACTGACAGGGAGCAGCCCCGGGCCGCT  
GGCTGGTGGGCCCCAATGACACCCATGCCAGAGAGGTGGGGATCCTGCCTAAGGTGTCTACGGGGCACTTGG  
AGGACCTGGCGTGCTCAGACCCAACAGCAAAGGAACTAGAAAGAAGGACCCAGAACGGCTTGCTTTCCTGCATCT  
CTGTGAAGCCTCTCTCCTTGGCCACAGACTGAACTCGCAGGGAATGCAGCAGGAAGGAACAAAGACAGGCAAACG  
GCAACGTAGCCTGGGCTCACTGTGCTGGGGCACGGCGGGATCCTCCACAGAGAGGAGGGGACCAATTCTGGACAG  
ACAGATGTTGGGAGGATACAGAGGAGATGCCACTTCTCACTACCACTACCAGCCAGCCTCAGAAGGCCCCAGAG  
AGACCCTGCAAGACCACGGAGGGAGCGACACTTGAATGTAGAATAGGCAGGGGGCCCTGCCCCACCCCATCCAGC  
CAGACCCACGCTGACCATGCGTCAGGGGCCCTAGAGGTGGAGTTCTTAGCTATCCTTGGCTTTCAGAGCCAGCCT  
GGCTCTGCCCCCTCCCCATGGGCTGTGTCCTAAGGCCATTGAGAAGCTGAGGCTAGTTCCAGAAAACCTCTC  
CTGACCCCTGCCTGTTGGCAGGCCCACTCCCCAGCCCCAGCCCCTTCCATGGTACTGTAGCAGGGGAATTCCCTC  
CCCCCTCTGTGCCTTCTTTGTATATAGGCTTCTCACGGCGACCAATAAACAGCTCCCAAGTTTGT

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FIGURE 4903

GACAATATCAGGTGAGCTGTGGAGGTGGGGTCCTTGAAGCTGGATGACAGCAGCTGGCAAGGGGATAAGAGAGC  
AGTGAGCCCCCTCCCTCAAGGAGGTCTGGCTTTATCCATAGACAGGGCCCTCTGAGGTGGGGCTGAGGTACAAAGG  
GGGATTGAGCAGCCCAGGAGAAGAGAGATGGGGTTCCCTTCTTCTCTCTCAGATGCATGGTGGACTTAGGA  
CCTTGCTGGGGCTGGGGTCTCACTGCAGAGATGAAGCTGCTTCTGGCCCTAGCAGGGCTCCTGGCCATTCTGGCC  
ACGCCCCAGCCCTCTGAAGGTGCTGCTCCAGCTGTCTGGGGGAGGTGGACACCTCGTTGGTGCTGAGCTCCATG  
GAGGAGGCCAAGCAGCTGGTGGACAAGGCCTACAAGGAGCGGCGGAAAGCATCAAGCAGCGGCTTCGCAGCGGC  
TCAGCCAGCCCCATGGAATCCTATCCTACTTCAAGCAGCCGGTGGCAGCCACCAGGACGGCGGTGAGGGCCGCT  
GACTACCTGCACGTGGCTCTAGACCTGCTGGAGAGGAAGCTGCGGTCCCTGTGGCGAAGGCCATTCAATGTCACT  
GATGTGCTGACGCCCCGCCAGCTGAATGTGTTGTCCAAGTCAAGCGGCTGCGCTACCAGGACGTGGGGGTGACT  
TGCCCGGAGCAGGACAAATACCGCACCATCACCGGGATGTGCAACAACAGACGCAGCCCCACGCTGGGGGCCCTCC  
AACCGTGCCCTTTGTGCGCTGGCTGCCGGCGGAGTATGAGGACGGCTTCTCTTCCCTACGGCTGGACGCCCCGG  
GTCAAGCGCAACGGCTTCCCGGTGGCTCTGGCTCGCGCGGTCTCCAACGAGATCGTGGCTTCCCCACTGATCAG  
CTGACTCCGGACCAGGAGCGCTCACTCATGTTTCATGCAATGGGGCCAGCTGTTGGACCAGACCTCGACTTCACC  
CCTGAGCCGCGCCGCCGGGCTCCTTCGTCACTGGCGTCAACTGCGAGACCAGCTGCGTTACAGCAGCCGCCCTGC  
TTCCCGCTCAAGATCCCGCCCAATGACCCCCGCATCAAGAACCAAGCCGACTGCATCCCGTTCTTCCGCTCCTGC  
CCGGCTTGCCCCGGGAGCAACATCACCATCCGCAACCAGATCAACGCGCTCACTTCCCTCGTGGACGCCAGCATG  
GTGTACGGCAGCGAGGAGCCCCCTGGCCAGGAACCTGCGCAACATGTCCAACCAGCTGGGGCTGCTGGCCGTCAAC  
CAGCGCTTCCAAGACAACGGCCGGGCGCTGCTGCCCTTTGACAACCTGCACGATGACCCCTGTCTCCTCACCAAC  
CGCTCAGCGCGCATCCCTGCTTCTGGCAGGGGACACCCGTTCCAGTGAGATGCCCCGAGCTACCTCCATGCAC  
ACCTCTTACTTCCGGGAGCACAACCGGCTGGCCACAGAGCTCAAGAGCCTGAACCTAGGTGGGATGGGGAGAGG  
CTCTACCAGGAAGCCCCGAAGATCGTGGGGCCATGGTCCAGATCATCACTTACCGGGACTACCTGCCCCCTGGTG  
CTGGGGCCAACGGCCATGAGGAAGTACCTGCCACGTACCGTTCTTACAATGACTCAGTGGACCCACGCATCGCC  
AACGTCTTACCAATGCCTTCCGCTACGGCCACACCCCTCATCAACCCCTTCATGTTCCGCTGGACAATCGGTAC  
CAGCCCATGGAACCCAACCCCGTGTCCCCCTCAGCAGGGTCTTTTTTGCCTCCTGGAGGGTCTGTCTGGAAGGT  
GGCATTGACCCCATCTCCGGGGCTCATGGCCACCCCTGCCAAGCTGAATCGTCAGAACCAATTCAGTGGAT  
GAGATCCGGGAGCGATTGTTTGAAGGATCATGAGGATTGGGCTGGACCTGCCTGCTCTGAACATGCAGCGCAGC  
AGGGACCACGGCCTCCAGGATACAATGCCTGGAGGCGCTTCTGTGGGCTCCCGCAGCCTGAAACTGTGGGCCAG  
CTGGGCACGGTGCTGAGGAACCTGAAATTGGCGAGGAACTGATGGAGCAGTATGGCAGCCCCAACACATCGAC  
ATCTGGATGGGCGCGTGTCGAGCCTCTGAAGCGCAAAGGCCGCTGGGCCCACTCCTCGCCTGCATCATCGGT  
ACCCAGTTCAGGAAGCTCCGGGATGGTGATCGGTTTTGGTGGGAGAACGAGGGTGTGTTACAGCATGCAGCAGCGA  
CAGGCCCTGGCCAGATCTCATTGCCCCGATCATCTGCGACAACACAGGCATCACCCCGTGTCTAAGAACAAC  
ATCTTCATGTCCAATCATATCCCCGGGACTTTGTCAACTGCAGTACACTTCTGCATTGAACCTGGCTTCTTG  
AGGGAAGCCTCCTAGAGGCCAGGTAAGGGGGTGCAGCAGTGAAGGGTATATCTGGGCTGGCCAGTTGGAACCAG  
GAGATCTCCTTGCCCTAGATGAGCCAGCCCTGTTCTGGGTGCAGCTGAGAAAATGAGTGAAGTACTAGACGTTTCTT  
GTGTGCTCATGTATGTGCGAAGTATATAAATTGGCTTTTTCATGCGTGTGTGTTGTCTGAACATGGGGAGTGTTC  
ATGGGTTATGTGTATGTGCCATTTATGTGAGTGTGTGTTTGTGCTGATGAGAATACTGAGTATGTGGAAGGCAGC  
AGAGCGGACTGGTGAGGAGCACAGCTCAGGAAGTACTGAGTGGCTTCCAATCCTGGCTCTGTGGCTTGCTAGC  
TATGTGACCTTGAGCAAATTACCTCCTTAAACAAGAGTTTTCTTCTTGTAAATTACATCTGTCAATGGTTTCTT  
GGAGGGCCCACTTGTATCCTCTGGTTCTTCAATTTATTGAGCAGCTACTACATGCAAGGCAGTGTACTAGGCGTGA  
GAAGCATATAGAGGCAAGAAAGAGATACCAAGATGCCATCTGTGTCCTGGTTAGCAGAGCTGGACCAGTGGTGCC  
TTGGAGGGATAAGCCAGCTGCAGCTGGGCTGTGTGGTTGACTTATGGGCCAGCCAGGCTCAGGCCATGGC  
TCCCTTTTTTCTCCTCACCTGATTTCTTGCTTATTCACTGAAGTTCTCCTGAAGAGGAAGTGGGCTGTGGC  
CTTTCTGTACCATTTATTTGCTCCCAATGTTTATGATAATAAAGGCACCGCTGATGGGGACCTCC

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**FIGURE 4904**

MGVPPFFSSLRMCVLDGPCWAGGLTAEMKLLLALAGLLAILATPQPSEGAAPAVLGEVDTSVLSSMEEAKQLVDK  
AYKERRESIKQRLRSGSASPMELLSYFKQPVAATRTAVRAADYLHVALDLLERKLRSIWRRPFNVTDVLTQAQLN  
VLSKSSGCAYQDVGVTCPEDQKYRTITGMCNNRRSPTLGASNRAFVRWLPAEYEDGFSLPYGWTPGVKRNGFPVA  
LARAVSNEIVRFPTDQLTPDQERSLMFMQWGQLLDHDLDFTEPAARASFVTGVNCETSCVQQPPCFPLKIPPND  
PRIKNQADCIPFFRSCPACPGSNITIRNQINALTSFVDASMVYGSEEPLARNLRNMSNQLGLLAVNQRFQDNGRA  
LLPFDNLHDDPCLLTNRSARIPCFLAGDTRSSEMPELTSMHTLLLREHNRLATELKSLNPRWDGERLYQEARKIV  
GAMVQIITYRDYLPVLGPTAMRKYLPTYRSYNDSDPRIANVFTNAFRYGHTLIQPFMFRLDNRYQPMENPRV  
PLSRVFFASWRVVLEGGIDPILRGLMATPAKLNQONQIAVDEIRERLFEQVMRIGLDLPALNMQRSRDHGLPGYN  
AWRRFCGLPQPETVGQLGTVLRNLKLARKLMEQYGTNNIDIWMGGVSEPLKRKGRVGPLLACIIGTQFRKL RDG  
DRFWWENEGVFSMQQRQALAQISLPRIICDNTGITTVSKNNIFMSNSYPRDFVNCSTLPALNLAWSREAS

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**FIGURE 4905**

TTCTTCCGCTCCTGCCCCGGCTTGCCCCGGGAGCAACATCACCATCCGCAACCAGATCAACGCGCTCACTTCCTTC  
GTGGACGCCAGCATGGTGTACGGCAGCGAGGAGCCCCCTGGCCAGGAACCTGCGCAACATGTCCAACCAGCTGGGG  
CTGCTGGCCGTCAACCAGCGCTTCCAAGACAACGGCCGGGCCCTGCTGCCCTTTGACAACCTGCACGATGACCCC  
TGTCTCCTCACCAACCGCTCAGCGCGCATCCCCTGCTTCTGGCAGGTGAGCTTTGGGGTGGGGACCAGAGGTGG  
CATAGGAGATGTTCCCTGTTGGAGCCACAGGGACACCCGTTCCAGTGAGATGCCCGAGCTCACCTCCATGCACAC  
CCTCTTACTTCGGGAGCACAAACGGCTGGCCACAGAGCTCAAGAGCCTGAACCCTAGGTGGGATGGGGAGAGGCT  
CTACCAGGAAGCCCGAAGATCGTGGGGGCCATGGTCCAGGTAGGCCGTCTTGAACACCGGGCACACGGGATCCA  
GATGTGTCCCTGCAACATCCTAGCTGTGTGACCTTGGGCAAGTTCCTAACGCTCCTGAGCCTTGCCCTTCTTCATC  
CATGAGGCTGTAAGGATTATAATACATATATGAAAAACACCTTTCAGATAGTAAGTGCTTGACAAAGCCTCCTTCC  
CTTCCCTCTCCTTCTTCGCGAGGTTTGCTCCCTGCAGTCTTCTTTCCCTGTGGGTCTGTTATTGGTGTGGGAGGGT  
TGAATGTTTGGTTTAGCGCCCAAGTAGCTGTTTCACTAAATTTCTTCTCCCTCCATCTCACTGTCACTCTTAGCTC  
CTTTACCCACTCACCTCTTCTTTTTTAAATTAATAAATAATATAGGGCTGGGCGCGGTGGCTCATGCCTGTAATCC  
CAGCACTTTGGGAGGCGGAGGCGGGTGGATCACGAGGTGAGGAGATCAAGACCATGCTGGCTAACACGGTGAAAC  
CCCATCTCTACTAAAAATACAAAAATTAGCCGGGCGTGGTGGCGGGCACCTGTAGTCCCAGCTACTTGGGAGGCT  
GAGGCAGGAGAATGGCGTGAACCTGGCTGGAGTGCAGTGGTGCATCTTGGCTCACTGCAACCTCCACCTTTCAG  
GCTCAAGCCATTCTCCC

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**FIGURE 4906**

AGCCAGTTTGAAGTAGATCTGTACCAAAATGAAACAGCCTGTGAGAGTCCTTTGGATTATCAGTACCGTCAGGAG  
ATCCTGAAGCTGGAGAATTTCGGGTGGCAAGAAAAACCGACGAATCTTTACCTACACTGACTCTGATAGATACACC  
AATTTGGAGGAGCACTGTGAGAGAATGACCCTGCAGCCAGCGAGGTGCCTTCATTCTTTGGTCGAGCGAATGGCA  
AATGTGAGGCGTCGCCGGCAGGACAGGCGAGGGATGGAGGGCGGCATCCTCAAGTCACGCATCGTCACCTGGGAG  
CCCTCAGAAGAGTTTGTGAGGAACAACCACGTCATTAACACCCCTCTTCAGACAATGCACATCATGGCAGACCTG  
GGGCCCTATAAAAAGCTTGGCTATAAGAAGTATGAACATGTCTGTGTACTCTGAAGGTGGATAGCAATGGTGTG  
ATCACAGTAAAGCCTGACTTCACGGGCCTCAAAGGACCCTACAGGATTGAGACGGAGGGGGAGAAGCAGGAGCTG  
TGGAATATACGATCGACAATGTTTCCCCCAGCACAGCCGAGGAGGAGGAGCGGGAACGGCGAGTGTTCAAG  
GATCTTTATGGCCGGCACAAAGGAGTATCTCAGCAGCCTCGTAGGCACCGACTTTGAGATGACTGTCCAGGTGCC  
CTCCGGCTCTTTGTAAATGGAGAGGTGCTTTTCAGCCCAAGGCTATGAGTATGACAATCTCTACGTCCACTTCTTT  
GTAGAATTGCCAAGTGTCTACTGGTCAAGCCAGCATTCAGCAGCTCTCAGGAGTAACACAGACCTGCACCACC  
AAGTCCCTGGCAATGGACAAGGTGGCTCATTCTCCTACCCATTACGTTTGAAGCCTTCTTCTCCATGAGGAT  
GAATCTTCTGATGCACTCCCGGAGTGGCCTGTGCTCTACTGTGAGGTCTCTCGCTGGACTTCTGGCAGAGGTAC  
CGTGTGGAAGGCTATGGGGCTGTGGTGTCTGCTGCCACTCCAGGCTCACACACCCTGACAGTCTCCACGTGGAGA  
CCTGTGGAGCTTGGCACGGTGGCTGAGCTGAGGAGGTTTTTTCATTGGCGGTTCTCTGGAAGTGGAGGACCTCTCC  
TATGTACGGATACCAGGATCCTTCAAGGGGGAACGCCTGAGCCGCTTTGGACTCCGCACAGAGACCACAGGCACT  
GTCACCTTCCGCTTGCCTGTCTGCAGCAGTCCAGGGCCTTCATGGAATCGAGCTCCCTTCAGAAAAGGATGCGG  
AGTGTGTTGGACCGTCTGGAAGGGTTTCAGCCAGCAGAGTTCCATTACAATGTGCTAGAGGCCCTTCGTCGAGCC  
CGGCGCCGCATGCAGGAGGCCCGGGAAGCCTCCCGCAGGACCTAGTGAGCCCTCTGGAACCCTGGTCTCCTAG

CTCACAGCAGCCCTGGCCACAGTGCAAGAGGACAAGATGGGGGATATCTGAGGCCAGTGCTCTCCTGCCTCTTC  
GTCTTTCTGATTAGAGACCACGTTGGTCTGCTGAGAACCAGAAAAGCTGGGAAATTCCCGGCTGGCCCTCTGCC  
TAGCCTTCTGCAGGGTCTTCTCCCTACCTGTGGAAATAAAGCCAGAGACCCTGTGGCCCCCTTTATATTGTC  
AGCCACTGTCAGATGGGCATCACAGCAAGGCAGGCTTTTTGATCTGAAGCTGTTTGGGGTGACCCCATAGTGAGT  
CTGGCCTTGACTCACTTTTCTGGCTGTACTCACAGTAGCAGGGGATCTGCTGTTCTCCACCCTTTAAAAATGGA  
GCCTTTCATCTTCCAAGACCAAAGAAGGAAGGAAGGTGGACGGTGAGAGGGTCTTAAATCCCCAGCCTGTGAGTC  
TCAGCCTCTTCCAGGGAAGCCTCATTCTACTGCTTGGGGCTTGCTGAGGTTGAGATATGAGTTATTTCTGAGTA  
AGTGAAGGCTGAAGGCAGTGCTGAGTCCTTTCTGCTAGCTGGGTGGTATCTTTTACTGTGTTTTTTTGTGTTT  
GTTTTTTGTTTTTTGTTACATAAACCCCTTTTATTTTGGAAAAA

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**FIGURE 4907**

MTTAASEVPSFLVERMANVRRRRQDRRGMEGGILKSRIVTWEPSEEFVRNNHVINTPLQTMHIMADLGPKKLG  
KKYEHVLC TLKVDSNGVITVKPDTGLKGPYRIETEGEKQELWKYTIDNVSPHAQPEEEERERRVFKDLYGRHKE  
YLSSLVGTDFEMTVPGALRLFVNGEVVS AQGYEYDNLYVHFFVELPTAHWSSPAFQQLSGVTQTCTTKSLAMDKV  
AHFSYPFTFEAFFLHEDESSDALPEWPVLYCEVLSLDFWQRYRVEGYGAVVLPATPGSHTLVSTWRPVELGTVA  
ELRRFFIGGSLELEDLSYVRIPGSFKGERLSRFGRLTETTGTVTFRHLHCLQQSRAFMESSLQKMRMSVLDRL  
EGFSQQSSIHNVL EAFRRARRRMQEARESLPQDLVSPSGTLVS

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## FIGURE 4908

GGCCTGTTCTCGAGTCCGCGCTTTTCGTCACCGCCATGTCGGGAGGTGGTGTGATTTCGTGGCCCCGCAGGGAACA  
ACGATTGCCGCATCTACGTGGGTAACCTTACCTCCAGACATCCGAACCAAGGACATTGAGGACGTGTTCTACAAAT  
ACGGCGCTATCCGCGACATCGACCTCAAGAATCGCCGCGGGGACCGCCCTTCGCCTTCGTTGAGTTCGAGGACC  
CGCGAGACGCGGAAGACGCGGTGTATGGTCGCGACGGCTATGATTACGATGGGTACCGTCTGCGGGTGGAGTTTC  
CTCGAAGCGGCCGTGGAACAGGCCGAGGCGGCGGGGGTGGAGGTGGCGGAGCTCCCCAGGTCGCTATGGCC  
CCCCATCCAGGCGGTCTGAAAACAGAGTGGTTGTCTCTGGACTGCCTCCAAGTGGAAGTTGGCAGGATTTAAAGG  
ATCACATGCGTGAAGCAGGTGATGTATGTTATGCTGATGTTTACCGAGATGGCACTGGTGTGCTGGAGTTTGTAC  
GGAAAGAAGATATGACCTATGCAGTTCGAAAACCTGGATAACACTAAGTTTAGATCTCATGAGGGAGAACTGCCT  
ACATCCGGGTTAAAGTTGATGGGCCCAGAAGTCCAAGTTATGGAAGATCTCGATCTCGAAGCCGTAGTCGTAGCA  
GAAGCCGTAGCAGAAGCAACAGCAGGAGTGCAGTTACTCCCCAAGGAGAAGCAGAGGATCACCACGCTATPCTC  
CCCGTCATAGCAGATCTCGCTCTCGTACATAAGATGATTGGTGACACTTTTGTAGAACCCATGTTGTATACAGT  
TTTCCTTTTATTCAGTACAATCTTTTCATTTTTTAATTCAAACCTGTTTTGTTTCAAGATGGGCTAAAGTGTGAATT  
GCATTCTTGTAATATCCCTTGTCTCCTAACATCTACATTCCCTTCGTGTCTTTGATAAATTGTATTTAAGTGAT  
GTCATAGACAGGATTGTTTAAATTTAGTTAACTCCATACTCTTCAGACTGTGATATTGTGTAAATGTCTATCTGC  
CCTGGTTTGTGTGAAGTGGGATGTTGGGGGTGTTTGTGGTTATCTTACCTGGGGAAGTTCTTATGTTTATCTTGC  
TTTTCATGTGCTTTCTGTAGACATATCTGAAGAGATGGATTAAGAATGCTTTGGATTAAGGATTGTGGAGCACA  
TTTCAATCATTTTAGGATTGTCAAAGGAGGATTGAGGAGGATCAGATCAATAATGGAGGCAATGGTATGACTCC  
AAGTGCTATTGTACAGATGAAATTGGCAGTATTGACCTTATACTAAAAGGCAGGGGTTAAAAATGATTATATAC  
ATTTTCCTTAAACACTTGCAAACATTTTATTAGTTGTCTTTAGCTACAATTGCTTTTGTCTTTTAAACCTTGGC  
AATTGTGGCAAATATATTGCCCATTTTGTAGCAACTATTTTGTCTCCCTTCCCCCATTTTGTTTTAAATAGG  
GACTAATGTGGGAAGAACTGGCTAATTTGTACAGTGCTTAGTTACAAGTGTAAATGTGTGACCTGCTGTTGGTG  
TACATGTGGGTACAGGGTGTTTTAAATCCAACAAGATAGAGTATAATATCAATACTGCTAAATCTGCATGTCTCT  
CTGTGTGACTGATAGAGCGTTGCTATTTTCAATTTTTTAAAGACAAAATGAAAGCAAAATATAGAGTTCCAATGTAT  
TGGTGTAGATAATCTAGTTGGGAATACTTTTAAAGTCTCACCTTCCCCCTTAAACTAATATTATAATTGGTTTAT  
ATGTTTAAAGACTTTAATTTACAAATTAAATTGCAATGGGAGCATTAGATTTAGTTTTAGACTTAGGTGGGTA  
GCAATGCCAGTAACTTAAATTACGTAACCTTCTTGCAACCACGAAACCTGTAATACGCTGTACAGTAACAAGTGT  
TGGCATTATCAGTTGAAGTGTAAATACAAAATGCTTCTTCCAATTAGTCTCTATGATGATTAAGTTTCTAAAATT  
TATCTGAACACCATTAGAACTTGTTTTGGGGAATTTGATAGTTATTGATGTGCATCTGTTAAACTGATGACAG  
ACATAACTCATATTCCCCAGAAACCTTTTTTGATTACAGTATCTAACATTTGCCTCCTCTTTTTTGGTTTTGC  
TGGTTATAAAGGTTTGGATTGGAGAGGGCTCACTGGATCCCAATCCTTGGAGCTGGATCATTGGATTCAAATCAT  
AATGTGGATAGGATAGGGAGGATGAATTACCAGGATTATGGAGCGGGATCAGATTACCAGGAACATAGGAGTGG  
ATTCTGCCCCAACCAAACCGCATTCGTGTGGATTTTTTATTCAACTTAATTGGCTATTCCAAAGATTTTTTTT  
TTCTATTTTTGACGATTGGAGCCCTTAAGATGCACGATGGAATTGTGTTTTGCGTTTTTGGTAAAAGGAGCAA  
AGCGAGGACCTGGAGATAAACGCTGGAGCAATCTCCTTGAAGGATTCAGCACGAGTAGATGGTAAACATTTAAA  
GGGGAAGGGGGGTTTTGTTTAAATAGTAAATCAGTAAGTCACTTCTAAATTTAAAGAAAACAAATTTGGAGTT  
GAAGAATAAGTAGGTTTCCAATTGGCTATTGCCGTTTTCTTTGAAAAATAAACATTTTTTAAAAAACAAAAAA  
AAAAAAA

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**FIGURE 4909**

MSGGGVIRGPAGNNDCRIYVGNLPPDIRTKDIEDVFYKYGAIRDIDLKNRRGGPPFAFVEFEDPRDAEDAVYGRD  
GYDYDGYRLRVEFPRSGRGTGRGGGGGGGGGAPRGYGPSSRRSENRRVVVSGLPPSGSWQDLKDHMREAGDVCYA  
DVYRDGTGVVEFVRKEDMTYAVRKLDNTKFRSHEGETAYIRVKVDGPRSPSYGRSRSRSRSRSRSRSRSNSRSRS  
YSPRRSRGSPRYSPRHSRSRSRT



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**FIGURE 4910**

ATGGGTAAGATCCGGAAGGCCCAAGGAGAAGGGCTGCCCCGCCCACTGCCCCCTGCTGGTCCAGCCCAACCTCCCC  
TTTGGGTACCCAGTCCACGGAGTGGAGGTGATGCCCCTGCACACGGTTCCCATCCCAGGCCTCCAGTTTGAAGGA  
CCCGATGCCCCCGTCTATGAGGTACCCCTGACAGCTTCTCTGGGGACACTGAACACCCCTTGCTGATGTCCCAGAC  
AGTGTGGTGCAGGGCAGAGGCCAGAAGCAGCTGATCATTTCTACCAGTGACCGGAAGCTGTTGAAGTTCATTCTT  
CAGCACGTGACATACACCAGCACGGGGTACCAGCACCAGAAGTACTATCCCCACATTGCCATTGACCCCATAGAG  
CCACTCGAGGAGAGAACAATCATGCTGTGCGCTTTGCACCTGTGAGTCTGGAGTCCAGGTCCTCAGTGGCCAAG  
TTTCCAGTGACCATCCGCCATCCTGTCATACCCAAGCTATACGACCCCTGGACCAGTGTTCCTTTCAGTGTAGTCTT  
AATCAGACTATTCAACTCCTCATCACCCAGACACTGGTAGTATCTGGCACCAGGTGGGGTGGGAAGACAACCCGT  
GAGTATTACACCTTTCATGTGGGTACTTTGCCCCATTGACCTAAACAACAATCAGCTAAACAGCAGGAAGTCCAA  
TTCAAAGCTTACTACCTGCCCAAGGATGATGAGTATTACCAGTTCTGCTATGTGGATGAGGATGGTGTGGTCCGG  
GGAGCAAGTATTCTTTCCAATTCCGTCCAGAAAATGAGGAAGACATCCTGGTTGTTACCACTCAGGGAGAGGTG  
GAAGAGATTGAGCAGCACACAAGGAGCTTTGCAAAGAAAACCAGGAGCTGAAGGACAGCTGTATCAGCCTCCAG  
AAGCAGAACTCAGACATGCAGGCTGAGCTCCAAAAGAAGCAGTATCTTTGA

[illegible]

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**FIGURE 4912**

MEETIKDPPTSAVLLDHCHFSQVIFNSVEKFYIPGGDVTCHYTFTQHFIPRRKDWIGIFRVGWKTTREYYTFMWV  
TLPIDLNNKSAKQQEVQFKAYYLPKDDEYYQFCYVDEDDGVVRGASIPFQFRPENEEDILVVTTQGEVEEIEQHNK  
ELCKENQELKDSCISLQKQNSDMQAELOKKQEELETLSINKKLELVKEQKDYWETELLQLKEQNQKMSSENEK  
MGIRVDQLQAQLSTQEKEMEKLVOGDQDKTEQLEQLKKENDHLFLSLTEQRKDQKKLEQTVEQMKQNETTAMKKQ  
QELMDENFDLSKRLSENEIICNALQRQKERLEGENDLLKRENSRLLSYMGLDFNSLPYQVPTSDEGGARQNPGLA  
YGNPYSGIQESSSPSPLSIKKCPICKADDICDHTLEQQQMQLCFNCPICDKIFPATEKQIFEDHVFCHSL

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**FIGURE 4913**

AAAAAATGCTTCTGTGCTCTAAGATATATATGTGTGTGTGTGTGCTACATATATATTTTTTAAGAAAGGACCATC  
TCTTTAGGATATATTTTTTAAATTCTTTGAAACACATAACCAAAATGGTTTGATTCACTGACTGACTTTGAAGCTG  
CATCTGCCAGTTACACCCAAATGGCTTTAATCCCTCTCGGGTCTGGTTGCCTTTTGCAGTTTGGGTTGTGGAC  
TCAGCTCCTGTGAGGGGTCTGGTTAGGAGAGAGCCATTTTTAAGGACAGGGAGTTTATAGCCCTTTTCTACTTT  
CCTCCCTCCTCCAGTCCTTATCAATCTTTTTTCTTTTTCTGACCCCTCCTTCTGGAGGCAGTTGGGAGCT  
ATCCTTGTTTATGCCTCACTATTGGCAGAAAAGACCCCATTTAAACCCAGAGAACACTGGAGGGGGATGCTCTA  
GTTGGTTCTGTGTCCATTTTCTCTGTGCCAAAGACAGACAGACAGAGGCTGAGAGAGGCTGTTCTGAATCAAA  
GCAATAGCCAGCTTTTCGACACATACCTGGCTGTCTGAGGAGGAAGGCCTCCTGGAACTGGGAGCTAAGGGCGAG  
GCCCTTCCCTTCAGAGGCTCCTGGGGGATTAGGGTGTGGTGTGTTGCCAAGCCAAGGGGTAGGGAGCCGAGAAATT  
GGTCTGTGCGCTCCTGGTTGCACTTTGGGGAAGGAGAGGAAGTTGGGGCTCCAGGTAGCTCCCTGTTGTGGGAC  
TGCTCTGTCCCTGCCCCTACTGCAGAGATAGCACTGCCGAGTTCCCTTCAGGCCTGGCAGACGGGCAGTGAGGA  
GGGGCCTCAGTTAGCTCTCAAGGGTGCCTTCCCTCCTCCCAACCCAGACATACCTCTGCCAACTGGGAACCA  
GCAGTGCTAGTAACCTCACAGAGCCCCAGAGGGCCTGCTTGAGCCTTCTTGCTCCACAGGAGAAGCTGGTGC  
CTCTAGGCAACCCCTTCTCCACCTCTCATCAGGGGTGGGGTTCTCCTTTCTTTCCCTGAAGTGTATGGG  
GAGATCCTAGTGGCTTTGCCATTCAAACCACTCGACTGTTTGCTGTTTCTTGAAAACCAAGTAGAAGGGAAACAG  
CACAGCCTGTACAGTAATTGCAGGAAGATTGAAGAAAAATCCTCATCAATGCCAGGGGACATAAAAGCCATTTT  
CCTTCCAAATACTCGACAATTAGATGCAGAACATTTCTCTGTATTCACTTAGAGTAACACCAGCTGAAAAC  
GCAGTTTCTTTCTTTGGATACATAAGGCTTCTCTATCGGGGTACGGGACAGGGAGGAGGCCTCATGTCTGAAGG  
GGGATTTAGGGGCGAGAGCCCCAGCCCTGACCCTCGGTCTGTGCACCGCTTTGGGGCACAGTCTGATGGCGCCT  
TTGCTGGCGCCTTAGTATGGTTGACTCCGGATGGACAAAAGAAAAAAATTTTTTTCTTGAATGAAATAGCAGG  
AAGCTCCTCGGGAGCATGTGTTTTGATTAAACCGCAGGTGATGGATGCTACGAGTATAAATGGATTAACTACCTCA  
ATCCTTACAGTAAGATTGGAATAAGGGCAGGGACTCATGCATAAGGGTATGAATCCCAGCCAGGACAAGTGAGT  
TGAGGCTTGTGCCACAAAAGTTTGTCTTGGGGAACAGGCAGGCCTGCCAGGATCCCCCATATCGATTGGGC  
TGGGAGGGCTGGCCATGAGGTCCCCACTTTCTGCTTTCTTGGCCATGTGTACCCCTTTGGCCTCCAGCTTGTC  
CCTCTCTCACTTTCTATAGCTTTGTTGGACCAGATGGTGAGGAAAGGAATGGCCTCTTCCCTTCTAGAGGGGGCT  
GGCTGGAGTGAGACCTGGGGCTTGGCCTGGAACCCACCACAGCCCCAAAGTCAGGAAGCCTGGGGAAACCAGA  
GCTGAGACCTCTTCAACAGGGTTTCTTTGAGATCCTACACCTCCATTGGGCCCTTTTTCAGTCTTCAATGGGGC  
CCAGTTGGCTCTAGAAGGAGAAGAGGTGAAGCAGGATCCTTTGCCCTGGGGAGTCTGAGGGCGCGGTCTTGGA  
CTCATTAGGCCGTCTTTGTAGTTGGGGGAGTCCACTGGGCGATCCAGCCCTCCCCACCCACCTCTAATGG  
ACCTCCTCATAGAAGCCCCATTTCACTTTTGTATCTACCTCTTAGCAAAACAATAGATAAATTAGGTAGTGG  
CAGCTCCACTTGCTTAGGTTAGGGGGGAAAAAGATTTCTTTTCCAAAGGAAAAAATATTACCTTGAGAATAC  
TTTCCAAAAATAAAATTAAAAA

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**FIGURE 4914**

MALIPSRVWLPPFAVWVDSAPVRGLVRREPFLRTGSFIALFYFPPLLPLINLFSFFLTSPFWRQLGAILVYASL  
LAEKTPFKTQRTLEGDALVGSVSIFLCAKDRQTEAERGCS

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**FIGURE 4915**

GGGACGTGGAGACCCGGGGTCCCGGCAGCCGGGCGGCCCGGGGCCAGGGTGGGGATGCACCGCCGCGGGGTGG  
GAGCTGGCGCCATCGCCAAGAAGAACTTGCAGAGGCCAAGTATAAGGAGCGAGGGACGGTCTTGGCTGAGGACC  
AGCTAGCCCAGATGTCAAAGCAGTTGGACATGTTCAAGACCAACCTGGAGGAATTTGCCAGCAAACACAAGCAGG  
AGATCCGGAAGAATCCTGAGTTCCGTGTGCAGTTCAGGACATGTGTGCAACCATTGGCGTGGATCCGCTGGCCT  
CTGGAAAAGGATTTTGGTCTGAGATGCTGGGCGTGGGGGACTTCTATTACGAACTAGGTGTCCAAATTATCGAAG  
TGTCCTGGCGCTGAAGCATCGGAATGGAGGTCTGATAACTTTGGAGGAACTACATCAACAGGTGTTGAAGGGA  
GGGGCAAGTTCGCCCAGGATGTCAGTCAAGATGACCTGATCAGAGCCATCAAGAACTAAAGGCACTTGGCACTG  
GCTTCGGCATCATCCCTGTGGGCGGCACCTTACCTCATTGAGTCTGTTCCAGCTGAGCTCAATATGGATCACACCG  
TGGTGCTGCAGCTGGCAGAGAAGAATGGCTACGTGACTGTGAGTGTGAGATCAAAGCCAGTCTTAAATGGGAGACCG  
AGCGAGCGCGCAAGTGTGGAACACCTGCTGAAGGAAGGGTTGGCGTGGCTGGACTTACAGGCCCCAGGGGAGG  
CCCACTACTGGCTGCCAGCTCTCTTCACTGACCTCTACTCCCAGGAGATTACAGCTGAGGAGGCCAGAGAAGCCC  
TCCCCTGACTGCATGTGGAAGGGCACACAGCAGCAGGCAGGGAGGAGGCGGAGGTGGCAAATAAACCTGGGCAAT  
TTTGTTTATACAAAAATAGAAAAAA

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**FIGURE 4916A**

AGCAGACGGGAGTTTCTCCTCGGGGTCGGAGCAGGAGGCACGCGGAGTGTGAGGCCACGCATGAGCGGACGCTAA  
CCCCCTCCCCAGCCACAAAGAGTCTACATGTCTAGGGTCTAGACATGTTTCAGCTTTGTGGACCTCCGGCTCCTGCTG  
TCCTCTTAGCGGCCACCGCCCTCCTGACGCACGGCCAAGAGGAAGGCCAAGTCGAGGGCCAAGACGAAGACATCC  
CACCAATCACCTGCGTACAGAACGGCCTCAGGTACCATGACCAGACGTGTGGAAACCCGAGCCCTGCCGGATCT  
GCGTCTGCGACAACGGCAAGGTGTTGTGCGATGACGTGATCTGTGACGAGACCAAGAACTGCCCCGGCGCCGAAG  
TCCCCGAGGGCGAGTGTCTGTCCTGCTGCCCCGACGGCTCAGAGTCACCCACCGACCAAGAAACACCGGCGTCTG  
AGGGACCCAAGGGAGACACTGGCCCCGAGGCCAAGGGGACCCGACGGCCCCCTGGCCGAGATGGCATCCCTG  
GACAGCCTGGACTTCCCGGACCCCCGACCCCCGACCTCCCGGACCCCCCTGGCCTCGGAGGAAACTTTGCTC  
CCCAGCTGTCTTATGGCTATGATGAGAAATCAACCGAGGAATTTCCGTGCTGGCCCATGGGTCCCTCTGGTC  
CTCGTGGTCTCCCTGGCCCCCTGGTGACCTGGTCCCCAAGGCTTCCAAGGTCCCTGGTGAGCCTGGCGAGC  
CTGGAGCTTCAGGTCCCATGGGTCCCCGAGGTCCCCAGGTCCCCCTGGAAAGAATGGAGATGATGGGGAAGCTG  
GAAACCTGGTGTCTGGTGAGCGTGGGCTCTGGGCTCAGGGTGTCTGAGGATGCCCCGGAACAGCTGGCC  
TCCCTGGAAATGAAGGACACAGAGGTTTCAAGTGGTTGGATGGTGCCAAGGGAGATGCTGGTCTGTGGTCTTA  
AGGGTGAGCCTGGCAGCCCTGGTGAAATGGAGCTCCTGGTGAGATGGGCCCCCTGGCCTGCTGGTGAGAGAG  
GTCGCCCTGGAGCCCCCTGGCCTGCTGGTGCTGCTGGAATGATGGTGCTACTGGTGCTGCCGGGCCCTGGTC  
CCACCGGCCCGCTGGTCTCTCTGGCTTCCCTGGTGCTGTTGGTGCTAAGGGTGAAGCTGGTCCCCAAGGGCCCC  
GAGGCTCTGAAGGTCCCCAGGGTGTCGCTGGTGAGCCTGGCCCCCTGGCCCTGCTGGTGCTGCTGGCCCTGCTG  
GAAACCTGGTGCTGATGGACAGCTGGTGCTAAAGGTGCCAATGGTGCTCCTGGTATTGCTGGTGCTCCTGGCT  
TCCCTGGTGCCCGAGGCCCCCTTGGACCCAGGGCCCCGGCGCCCTCCTGGTCCCCAAGGGTAACAGCGGTGAAC  
CTGGTGCTCCTGGCAGCAAAGGAGACACTGGTGCTAAGGGAGAGCCTGGCCCTGTTGGTGTTCAAGGACCCCTG  
GCCCTGCTGGAGAGGAAGGAAAGCGAGGAGCTCGAGGTGAACCCGGACCCACTGGCCTGCCCGGACCCCTGGCG  
AGCGTGGTGAGCCTGGTAGCCGTGGTTTCCCTGGCGCAGATGGTGTTGCTGGTCCCCAAGGGTCCCGCTGGTGAAC  
GTGGTTCTCTGGCCCTGCTGGCCCCAAAGGATCTCCTGGTGAAGCTGGTGCTCCCGGTGAAGCTGGTCTGCTG  
GTGCCAAGGGTCTGACTGGAAGCCCTGGCAGCCCTGGTCTGATGGCAAACTGGCCCCCTGGTCCCGCCGGTC  
AAGATGGTCGCCCGGACCCCCAGGCCACCTGGTGCCCGTGGTCAGGCTGGTGATGGGATTCCCTGGACCTA  
AAGGTGCTGCTGGAGAGCCCCGGCAAGGCTGGAGAGCGAGGTGTTCCCGGACCCCTGGCGCTGTGCTGCTG  
GCAAGATGGAGAGGCTGGAGCTCAGGGACCCCTGGCCCTGCTGGTCCCGCTGGCGAGAGAGGTGAACAAGGCC  
CTGCTGGCTCCCCCGATTCCAGGGTCTCCTGGTCTGCTGGTCTCCAGGTGAAGCAGGCAAACTGGTGAAC  
AGGGTGTTCTCGGAGACCTTGGCGCCCTGGCCCTCTGGAGCAAGAGGCGAGAGAGGTTTCCCTGGCGAGCGTG  
GTGTGCAAGGTCCCCCTGGTCTGCTGGTCCCCGAGGGGCCAACGGTGCTCCCGGCAACGATGGTGCTAAGGGTG  
ATGCTGGTGCCCTGGAGCTCCCGGTAGCCAGGGCGCCCTGGCCTTCAGGGAATGCCCTGGTGAACGTGGTGCTG  
CTGGTCTTCCAGGGCCTAAGGGTGACAGAGGTGATGCTGGTCCCCAAGGTGCTGATGGCTCTCCTGGCAAGATG  
GCGTCCGTGGTCTGACTGGCCCCATTGGTCTCTCTGGCCCTGCTGGTGCCCTGGTGACAAGGGTGAAAGTGGTC  
CCAGCGGCCCTGCTGGTCCCACTGGAGCTCGTGGTGCCCCCGGAGACCGTGGTGAGCCTGGTCCCCCGGCCCTG  
CTGGCTTTGCTGGCCCCCTGGTGCTGACGGCCAACCTGGTGCTAAAGGCGAACCTGGTGATGCTGGTGCTAAAG  
GCGATGCTGGTCCCCCTGGCCCTGCCGGACCCGCTGGACCCCTGGCCCCATTGGTAATGTTGGTGCTCCTGGAG  
CCAAAGGTGCTCGCGGCAGCGCTGGTCCCCCTGGTGCTACTGGTTTCCCTGGTGCTGCTGGCCGAGTCGCTCCTC  
CTGGCCCCCTCTGGAAATGCTGGACCCCTGGCCCTCCTGGTCTGCTGGCAAGAAGGCGGCAAGGTCCCGTG  
GTGAGACTGGCCCTGCTGGACGTCTGGTGAAGTTGGTCCCCCTGGTCCCCCTGGCCCTGCTGGCGAGAAAGGAT  
CCCCTGGTGCTGATGGTCTGCTGGTGCTCCTGGTACTCCCGGCCCTCAAGGTATTGCTGGACAGCGTGGTGCTG  
TCGGCCTGCCCTGGTCAGAGAGGAGAGAGAGGCTTCCCTGGTCTTCTGGCCCCCTCTGGTGAACCTGGCAAAACAG  
GTCCCTCTGGAGCAAGTGGTGAACGTGGTCCCCCTGGTCCCATGGGCCCCCTGGATTGGCTGGACCCCTGGTG  
AATCTGGACGTGAGGGGGCTCCTGGTGCCGAAGGTTCCCTGGACGAGACGGTTCTCTGGCGCCAAGGGTGACC  
GTGGTGAGACCGGCCCCGCTGGACCCCTGGTGCTCCTGGTGCTCCTGGTGCCCTGGCCCCGTGGCCCTGCTG  
GCAAGAGTGGTGATCGTGGTGAGACTGGTCTGCTGGTCCCACCGTCTGTGCGCCCTGTTGGCGCCCTGGCC  
CCGCCGACCCCAAGGCCCCCTGGTGACAAGGGTGAGACAGGCGAACAGGGCGACAGAGGCATAAAGGGTACC  
GTGGCTTCTCTGGCCTCCAGGGTCCCCCTGGCCCTCCTGGCTCTCCTGGTGAACAAGGTCCCTCTGGAGCCTCTG  
GTCTGCTGGTCCCCGAGGTCCCCCTGGCTCTGCTGGTGCTCCTGGCAAAGATGGACTCAACGGTCTCCTGGCC

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**FIGURE 4916B**

CCATTGGGCCCCCTGGTCCTCGCGGTGCGCACTGGTGATGCTGGTCCCTGTTGGTCCCCCGGCCCTCCTGGACCTC  
CTGGTCCCCCTGGTCCTCCCAGCGCTGGTTTCGACTTCAGCTTCCTGCCCCAGCCACCTCAAGAGAAGGCTCACG  
ATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTCA  
AGAGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCAGAGGGCAGCCGCAAGAACCCCGCCCGCACCTGCCGTG  
ACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATG  
CCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCCAAGA  
ACTGGTACATCAGCAAGAACCCCAAGGACAAGAGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGT  
TCGAGTATGGCGGCCAGGGCTCCGACCCCTGCCGATGTGGCCATCCAGCTGACCTTCCTGCGCCTGATGTCCACCG  
AGGCCTCCCAGAACATCACCTACCACTGCAAGAACAGCGTGGCCCTACATGGACCAGCAGACTGGCAACCTCAAGA  
AGGCCCTGCTCCTCCAGGGCTCCAACGAGATCGAGATCCGCGCCGAGGGCAACAGCCGCTTACCTACAGCGTCA  
CTGTGATGGCTGCACGAGTCAACCCGAGCCTGGGGCAAGACAGTGATTGAATACAAAACCACCAAGACCTCCC  
GCCTGCCCATCATCGATGTGGCCCCCTTGGACGTTGGTGCCCCAGACCAGGAATTGCGCTTCGACGTTGGCCCTG  
TCTGCTTCCCTGTAACCTCCCTCCCAACCTGGCTCCCTCCCACCCAACCAACTTCCCCCAACCCGGAAC  
AGACAAGCAACCCAACTGAACCCCTCAAAAGCCAAAAAATGGGAGACAATTTACATGGACTTTGGAAATAT  
TTTTTTCCTTTGCATTTCATCTCTCAAACTTAGTTTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTG  
CATTCAACCTTACCAAAAAAAGAAAAAAGATAAATAAATAACTTTTTAAAAAAGGAAGCTTGGTCCACT  
TGCTTGAAGACCCATGCGGGGTAAGTCCCTTTCTGCCCGTTGGGCTTATGAAACCCCAATGCTGCCCTTTCTGC  
TCCTTTCTCCACACCCCCCTTGGGGCCTCCCTCCACTCCTTCCCAAATCTGTCTCCCAGAAGACACAGGAAAC  
AATGTATTGTCTGCCAGCAATCAAAGGCAATGCTCAAACACCCAAAGTGGCCCCCACCCTCAGCCCGCTCCTGCC  
CGCCCAGCACCCCCAGGCCCTGGGGGACCTGGGGTTCTCAGACTGCCAAAGAAGCCTTGCCATCTGGCGCTCCCA  
TGGCTCTTGCAACATCTCCCTTCGTTTTTGGAGGGGTCTATGCCGGGGGAGCCACCAGCCCCCTCACTGGGTTCCG  
AGGAGAGTCAGGAAGGGCCACGACAAAGCAGAAACATCGGATTTGGGGAACGCGTGTCAATCCCTTGTGCCGAG  
GGCTGGGCGGGAGAGACTGTTCTGTTCTTGTGTAAGTGTGTTGCTGAAAGACTACCTCGTTCTTGTCTTGATGT  
GTCACCGGGGCAACTGCCTGGGGCGGGGATGGGGGAGGGTGGAAAGCGGCTCCCCATTTTATACCAAAGGTGCT  
ACATCTATGTGATGGGTGGGGTGGGGAGGGAATCACTGGTGCTATAGAAATTGAGATGCCCCCAGGCCAGCAA  
ATGTTCCTTTTTGTTCAAAGTCTATTTTTATTCTTGATATTTTTCTTTTTTTTTTTTTTTTTTGTGGATGGG  
ACTTGTGAATTTTTCTAAAGGTGCTATTTAACATGGGAGGAGAGCGTGTGCGGCTCCAGCCCAGCCCGTGTCTCA  
CTTTCCACCTCTCTCCACCTGCCTCTGGCTTCTCAGGCCTCTGCTCTCCGACCTCTCTCCTCTGAAACCTCCT  
CCACAGCTGCAGCCCATCCTCCCGGCTCCCTCCTAGTCTGTCTGCGTCTCTGTCCCCGGGTTTCAGAGACAAC  
TTCCCAAAGCACAAAGCAGTTTTTCCCCCTAGGGGTGGGAGGAAGCAAAAGACTCTGTACCTATTTTGTATGTGT  
ATAATAATTTGAGATGTTTTTAATTATTTTGATTGCTGGAATAAAGCATGTGGAATGACCCAAACATAA



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**FIGURE 4917**

CCTGTTGCTGATGCTGCCGTGCGGTACTTGTCAATCGAGCTGGCACTGCGGCGCTCTCCCGTCCCGCGGTGGTTGC  
TGCTGCTGCCGCTGCTGCTGGGCCTGAACGCAGGAGCTGTCATTGACTGGCCACAGAGGAGGGCAAGGAAGTAT  
GGGATTATGTGACGGTCCGCAAGGATGCCTACATGTTCTGGTGGCTCTATTATGCCACCAACTCCTGCAAGAACT  
TCTCAGAAGTGGCCCTGGTCATGTGGCTTCAGGGCGGTCCAGGCGGTTCTAGCACTGGATTTGGAACTTTGAGG  
AAATTGGGCCCCTTGACAGTGATCTCAAACCACGAAAACCACCTGGCTCCAGGCTGCCAGTCTCCTATTGTGG  
ATAATCCCGTGGGCACTGGGTTCACTTATGTGAATGGTAGTGGTGCCTATGCCAAGGACCTGGCTATGGTGGCTT  
CAGACATGATGGTTCTCCTGAAGACCTTCTTCAGTTGCCACAAAGAATTCCAGACAGTTCATTCTACATTTCT  
CAGAGTCCTATGGAGGAAAAATGGCAGCTGGCATTGGTCTAGAGCTTTATAAGGCCATTACAGCGAGGGACCATCA  
AGTGCAACTTTGCGGGGGTTGCCTTGGGTGATTCTGGATCTCCCCCGTGGATTCCGTGCTCTCCTGGGGACCTT  
ACCTGTACAGCATGTCTCTTCTCGAAGACAAAGGTCTGGCAGAGGTGTCTAAGGTTGCAGAGCAAGTACTGAATG  
CCGTAAATAAGGGGCTCTACAGAGAGGCCACAGAGCTGTGGGGGAAAGCAGAAATGATCATTGAACAGAACACAG  
ATGGGGTGAACTTCTATAACATCTTAACTAAAAGCACTCCACGCTCTACAATGGAGTCGAGTCTAGAATTCACAC  
AGAGCCACCTAGTTTGTCTTTGTTCAGCGCCACGTGAGACACCTACAACGAGATGCCTTAAGCCAGCTCATGAATG  
GCCCCATCAGAAAGAAGCTCAAAATTATTCTGAGGATCAATCCTGGGGAGGCCAGGCTACCAACGCTCTTTGTGA  
ACATGGAGGAGGACTTCATGAAGCCAGTCATTAGCATTTGTGGACGAGTTGCTGGAGGCAGGGATCAACGTGACGG  
TGTATAATGGACAGCTGGATCTCATCGTAGATACCATGGGTGAGGAGGCTGGGTGCGGAAACTGAAGTGCCAG  
AACTGCCCTAAATTCAGTCAGCTGAAGTGGAAGGCCCTGTACAGTGACCCTAAATCTTTGGAAACATCTGCTTTTG  
TCAAGTCCTACAAGAACCTTGCTTTTCTACTGGATTCTGAAAGCTGGTCATATGGTTCTTCTGACCAAGGGGACA  
TGGCTCTGAAGATGATGAGACTGGTGACTCAGCAAGAATAGGATGGATGGGGCTGGAGATGAGCTGGTTTGGCCT  
TGGGGCACAGAGCTGAGCTGAGGCCGCTGAAGCTGTAGGAAGCGCCATTCTTCCCTGTATCTAACTGGGGCTGTG  
ATCAAGAAGGTTCTGACCAGCTTCTGCAGAGGATAAAATCATTGTCTCTGGAGGCAATTTGGAAATTATTTCTGC  
TTCTTAAAAAACCTAAGATTTTTTAAAAAATTGATTTGTTTTGATCAAAATAAAGGATGATAATAGATATTATT  
TTTTCTTATGACAGAAGCAAATGATGTGATTTATAGAAAACTGGGAAATACAGGTACCCAAAGAGTAAATCAAC  
ATCTGTATACCCCTTCCAGGGGTAAGCACTGTTACCAATTTAGCATATGTCCTTGACAGAAATTTTTTTTCTAT  
ATATACATATATATTTTTTACC AAAATGAATCATTACTCTATGTTGTTTACTATTTGTTTGACATATCAGTATA  
TCTGAAACACCTTTTCATGTCAATAAATGTTCTTCTCTAACATTAA

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**FIGURE 4918**

MELALRRSPVPRWLLLLPLLLGLNAGAVIDWPTEEGKEVWDYVTVRKDAYMFWWLYYATNSCKNFSELPLVMWLQ  
GGPGGSSTGFNFEEIGPLDSLKPRKTTWLQAASLLFVDNPVGTGFSYVNGSGAYAKDLAMVASDMMVLLKTFF  
SCHKEFQTVPFYIFSESYGCKMAAGIGLELYKAIQRGTIKCNFAGVALGDSWISPVDSVLSWGPYLYSMSLLEDK  
GLAEVSKVAEQVLNAVNGLYREATELWGKAEMIEQNTDGVNFYNILTKSTPTSTMESSLEFTQSHLVCLCQRH  
VRHLQRDALSQLMNGPIRKKLKIIPEDQSWGGOATNVFVNMEEDFMKPVISIVDELLEAGINVTVYNGQLDLIVD  
TMGQEAWVRKLKWPPELPKFSQKWKALYSDPKSLETSAFVKSYKNLAFYWILKAGHMVPSDQGDMAKMMRLVTQ  
QE

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**FIGURE 4919**

CCGGACTGCGGAAGGATCGAGCTGGCCGCCGGAAGCTTCTCGGAGGAGCAGTTCTGGGAGGCCTGCGCCGAGCTC  
CAGCAGCCCGCTCTGGCCGGGCGGACTGGCAGCTCCTAGTGGAGACCTCGGGCATCAGCATCTACCGGCTGCTG  
GACAAGAAGACTGGACTTCATGAGTATAAAGTCTTTGGTGTTCTGGAGGACTGCTCACCAACTCTACTGGCAGAC  
ATCTATATGGACTCAGATTACAGAAAACAATGGGACCAGTATGTTAAAGAACTCTATGAACAAGAATGCAACGGA  
GAGACTGTGGTCTACTGGGAAGTGAAGTACCCTTTTCCCATGTCCAACAGAGACTATGTCTACCTTCGGCAGCGG  
CGAGACCTGGACATGGAAGGGAGGAAGATCCATGTGATCCTGGCCCGGAGCACCTCCATGCCTCAGCTTGGCGAG  
AGGTCTGGGGTGATCCGGGTGAAGCAATACAAGCAGAGCCTGGCGATTGAGAGTGACGGCAAGAAGGGGAGCAAA  
GTTTTCATGTATTACTTCGATAACCCGGGTGGCCAAATTCGGTCTTGGCTCATTAACTGGGCGGCCAAGAATGGA  
GTTCTTAACCTCTTGAAAGACATGGCAAGAGCCTGTCAGAACTACCTCAAGAAAACCTAAAGAAAGAGAACTGGGA  
ACATTGCATCCATGGGTTGATGTCTCTGGAAGTGCAACCAACCAATGTCTCTGGAAGTGCCACCTGGGAAGTGCCA  
CCTGGAAGTGTCTCTGGAAGAGCACCCACCCTGTTGAGCCTTCCCCTGCTGTTTCTGTCTTCAGAGGCCTACAC  
ACTACCACATCCTTTCTAAGCATGTTTGCCTGACATCCAGCTCACTCGTCTGCTTCCTTTCTCGCTCCCCCATC  
CTGGGCTGGGCTGCCTTCTTCTACAGTTCAATATGGGGCAGACTAGGGAAACCTTTGCTTGCTTACTATTAGGAG  
GGGAAGTCTTCAGTAGGGAACACGATCATTCCATTGTGCAATTTTACGGGGATGGGTGGGCGGAGGGACACAACA  
AAATTTAAGAATGACTATTTGGGCGGGCTGGCTCTTTTGAGCTTGTGATTTCTTCCAGCTTGGGAGGGGCTGCT  
GGAAGTGGCATTTCGTTTCAGAGCTGACTTTTCAGTGCACCCAACTGGATGACGTGCCAATGTCCATTTGCCTTAT  
GCTTTGTGGAGCTGATTAGGCTGGGATTTGAGGTGATAATCCAGTAAGTCTTTCCCTCGTTCCCTACTTGTGGAGGA  
TCAGTAGCTGTTATGATGCCAGACCATTGGGAGAGTATCAGAGGCCTGACCGGACACATAATACGACAACCACA  
TTTTTCCTCATCATCCATGAGGAAATGGATGATTTCTCTTTTCCATATGTCACTGGGGGAAAGGCTGCCTGTACC  
TCTCAAGCTTTGCATTTTACTGGAACTGAGGCGTCAAGATGGCTGTGGCAGCTAGCAAAAGCAAAGATGCTTTG  
TGCATAGCCTTGTGAAAAAGTATCTTTCTATGCAATAAGATGAATTTTCTCCAGAAATATTTAGAAATGTAGAA  
GGGATAACAGTTCACAGCCAGGTAAAATTTAACTGGTGGCTTAATGACTCTGCACCTTTTTCTCAGGAATTCTGC  
CTAAGTTGTCTGCCTTTTCTACCACCAAAAAGACTTTTAGTTTTCTATGCTTTCTCCTGAATTTTGGTAGGGTAA  
GTATTTCTATGTCAAAGGCACAGCCTTGATGATCTCAGGGAAAAATTTAATCACTGTGTATAATGATACTGAAC  
CTTGATTAATAACAGAAATTCAGGATGTAAAGCCACAGAATGGGATTTATTAATGTGGGATACCTCAGACTGTTT,  
GTTTTCTTTCTGGGAAGAAAAGTGTGTTCTATAATGAATAAATATAGAGTGGTTTTT

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**FIGURE 4920**

MELAAGSFSEEQWEACAELOQPALAGADWQLLVETSGISIIYRLLDKKTGLHEYKVFGVLEDCSPTLLADIYMS  
DYRKQWDQYVKELYEQECNGETVVYWEVKYFPFMSNRDYVYLRQRDLDMEGRKIHVILARSTSMPLGERSGVI  
RVKQYKQSLAIESDGKKGSKVFMYYFDNPGGQIPSWLINWAAKNGVPNFKDMARACQNYLKKT

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**FIGURE 4921A**

CCGCCCCCGACCCGAGCTCTTTTCGTCTGCCTGCCAGTTTCCTGCGTCCCCGGAGAGGATCCTGCTGAGCCCAGCC  
TCCCCCTCCCTTCTCCTCCTCCTCCTTGGAGAGCCCGGGCAGCCACTGCCCCGAGCCCCAGTGACAGGAGGA  
GACCATAACCCCGACAGCGCCATGGCCCAGATTCTGCCAATTCGTTTTTCAGGAGCATCTCCAGCTCCAGAACCT  
GGGTATCAACCCAGCAAACATTGGCTTCAGTACCCTGACTATGGAGTCTGACAAATTCATCTGCATTAGAGAAAA  
AGTAGGAGAGCAGGCCAGGTGGTAATCATTGATATGAATGACCAAGTAATCCAATTCGAAGACCAATTTTCAGC  
AGACAGCGCCATCATGAATCCAGCTAGCAAAGTAATTGCACTGAAAGCTGGGAAAACCTCTTCAGATTTTAAACAT  
TGAAATGAAAAGTAAAATGAAGGCTCATACCATGACTGATGATGTCACCTTTTGGAAATGGATCTCTTTGAATAC  
GGTTGCTCTTGTTACGGATAATGCAGTTTATCACTGGAGTATGGAAGGAGAGTCTCAGCCAGTGAAAATGTTTGA  
TCGCCATTCTAGCCTTGCAGGGTGCCAGATTACAATTACCGTACAGATGCAAAACAAAAGTGGTTACTTCTGAC  
TGGTATATCTGCACAGCAAAATCGTGTGGTGGGAGCTATGCAGCTATAATTCTGTAGATAGGAAAGTGTCTCAGCC  
CATTGAAGGACATGCAGCTAGCTTTGCACAGTTTAAGATGGAAGGAAATGCAGAAGAATCAACGTTATTTTGT  
TGCAGTTCGGGGCCAAGCTGGAGGGAAGTTACATATTATTGAAGTTGGCACACCACCTACAGGGAACCGCCCTT  
TCCAAAGAAGGCAGTGATGCTTTCTTTCCCTCCAGAAGCACAAAATGATTTTCTGTTGCAATGCAGATCAGTGA  
AAAGCATGATGTGGTGTCTTGATAACCAAGTATGGTTATATCCACCTCTATGATCTTGAGACTGGTACCTGCAT  
CTACATGAATAGAATCAGTGGAGAAACAATTTTGTACTGCACCTCATGAAGCCACAGCTGGAATAATTGGAGT  
AAACAGAAAGGGACAAGTTCTGTCACTGTGTGTGAAGAAGAAAACATAATTCCTTACATCACCATGTTCTACA  
AAATCCTGATTTGGCTCTGAGAATGGCTGTACGTAATAACTTAGCCGGTGTGAAGAACTCTTTGCCGGAAAT  
TAATGCTCTTTTGGCCAGGGAATTAATCGGAGGCAGCAAAGGTGGCTGCTAATGCACCAAAGGGAATTTCTCG  
TACTCCAGACACTATCCGTCGGTTCCAGAGTGTCCAGCCCAGCCAGGTCAAACCTCTCCTCTACTTCAGTACTT  
TGGTATCCTTTTGGACCAGGGACAGCTCAACAAATACGAATCCTTAGAGCTTTGTAGGCCTGTACTTCAGCAAGG  
GCGAAAACAGCTTTTGGAGAAATGGTTAAAAGAAGATAAGCTGGAATGTTCTGAAGAACTGGGTGATCTTGTA  
ATCTGTGGACCTACATTGGCACTTAGTGTGTACCTAAGGGCTAACGTCCCAAATAAAGTCATTTCAGTGCTTTGC  
AGAAACAGGTCAAGTCCAAAAGATTGTTTTATATGCTAAAAAAGTTGGATACACTCCAGATTGGATATTTCTGCT  
GAGAAATGTAATGCGAATCAGTCCAGATCAGGGACAGCAGTTTGGCCAAATGTTAGTTCAAGATGAAGAGCCTCT  
TGCTGACATCACACAGATTGTAGATGTCTTTATGGAATACAATCTAATTCAGCAGTGTACTGCATTCTTGCTTGA  
TGCTCTGAAGAATAATCGCCCATCTGAAGTCCCTTACAGACGCGGTACTTGAGATGAACCTTATGCATGCGCC  
TCAAGTTGCAGATGCTATTCTAGGCAATCAGATGTTACACATTATGACCGGGCTCATATTGCTCAACTGTGTGA  
AAAGGCTGGCCTACTGCAGCGTGCATTAGAACATTTCACTGATTATATGATATAAAACGTGCAGTGGTTCACAC  
CCATCTTCTTAACCCTGAGTGGTTAGTCAACTACTTTGGTTCCCTATCAGTAGAAGACTCCCTAGAATGTCTCAG  
AGCCATGCTGTCTGCCAACATCCGTCAGAATCTGCAGATTTGTGTTTCAGGTGGCTTCTAAATATCATGAACAACT  
GTCAACTCAGTCTCTGATTGAACTTTTTGAATCTTTCAAGAGTTTGAAGGTCTCTTTATTTTCTGGGATCCAT  
TGTTAACTTTAGCCAGGACCCAGATGTGCACTTTAAATATATTAGGCAGCTTGCAAGACTGGGCAAAATCAAAGA  
AGTAGAAAGAATCTGTAGAGAAAGCAACTGCTACGATCCTGAGCGAGTCAAGAATTTCTTAAGGAAGCAAACT  
AACAGATCAGCTACCACTTATCATTGTGTGTGATCGATTTGACTTTGTCCATGATTGGTGCTCTATTATATAG  
AAATAATCTTCAAAAGTATATAGAGATATATGTACAGAAGGTGAATCCAAGTCGACTTCTGTAGTTATTGGAGG  
ATTACTTGATGTTGACTGTTCTGAAGATGTCATAAAAAACTTGATTCTTGTTGTAAGAGGTCAATTCTCTACTGA  
TGAGCTTGTGCTGAGGTTGAAAAAAGAAACAGATTGAAACTGCTTCTGCCTTGGCTAGAGGCCAGAATTCATGA  
GGGCTGTGAGGAGCCTGCTACTCACAATGCCCTAGCCAAAATCTACATAGACAGTAATAACAACCCGGAGAGATT  
TCTTCGTGAAAATCCCTACTATGACAGTCGCGTGTGTGAAAGTATTGTGAGAAGAGAGATCCACATCTGCCTG  
TGTTGCTTATGAACGTGGCCAAATGTGATCTGGAACCTTATTAATGTTTGCAATGAGAATTCCTCTTCAAAGTCT  
TTCTCGCTACCTGGTACGTCGAAAGGATCCAGAATTGTGGGGCAGCGTGTCTGCTGGAAGCAATCCTTACAGGAG  
ACCCCTAATTGACCAGTTGTACAAACAGCTTTGTCTGAGACTCAGGACCCTGAAGAAGTGTCTAGTAACTGTAAA  
GGCTTTTCATGACTGCAGACCTTCTAATGAACCTATTGAACCTGCTGGAGAAAATTGTCCTTGATAACTCTGTATT  
CAGTGAACACAGGAATCTGCAAAACCTCCTTATCCTCACTGCAATTAAGGCTGACCGTACACGTGTTATGGAGTA  
TATTAACCGCCTGGATAATTATGATGCCCCAGATATTGCCAATATCGCCATCAGCAATGAGCTGTTTGAAGAAGC  
ATTTGCCATTTCCGGAAATTTGATGTCAATACTTCAGCAGTTCAGGTCTTAATTGAGCATATTGGAACCTTGGA  
TCGGGCATATGAGTTTGCTGAACGTTGCAATGAACCTGCGGTCTGGAGTCAACTTGCAAAAGCCAGTTGCAGAA  
AGGAATGGTGAAAGAAGCCATTGATTCTTATATCAAAGCAGATGATCCTTCTCCTACATGGAAGTTGTTTCAGGC

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**FIGURE 4921B**

TGCCAATACTAGTGGAACTGGGAAGAACTGGTGAAGTACTTGCAGATGGCCCGTAAGAAGGCTCGAGAGTCCTA  
TGTGGAGACAGAAGCTGATATTCGCACTGGCTAAAACAAACCGCCTTGCAGAGTTAGAAGAATTTATCAATGGACC  
AAATAATGCTCATATCCAACAAGTTGGTGACCGTTGTTATGATGAAAAAATGTATGATGCTGCTAAGTTGTTGTA  
CAATAATGTTTCCAATTTTGGACGTTTGGCATCTACCCTGGTTACCTGGGTGAATATCAGGCAGCTGTTGATGG  
GGCTAGGAAAGCTAACAGTACTCGAACATGGAAAGAGGCTGCTTCGCCTGTGTAGATGGGAAAGAATTCCGTCT  
TGCTCAGATGTGTGGACTTCATATTGTTGTACATGCAGATGAATTAGAAGAACCTTCAACTACTATCAGGATCG  
TGGCTATTTTGAAGAGCTGATCACCATGTTGGAAAGCAGCACTGGGACTTGAGCGAGCTCACATGGGAATGTTTAC  
TGAATTAGCTATTCTATACTCTAAATTTAAGCCTCAGAAAAATGAGGGAGCACCTGGAGCTGTTCTGGTCTAGAGT  
GAATATTTCCCAAGGTGCTAAGAGCTGCAGAACAAGCTCATCTTTGGGCAGAAGTGGTGTGTTTGTATGACAAGTA  
TGAAGAATATGATAATGCCATAATTACCATGATGAATCATCCAAGTATGCCTGGAAAGAAGGGCAATTCAAAGA  
TATCATTACCAAGGTTGCCAATGTGGAACTATACTACAGAGCAATACAGTTCTACTTAGAATTCAGCCTCTGTT  
GTTAAATGATTTGCTGATGGTGTGTCTCCACGGTTGGATCACACTCGTGCAGTCAATTATTTACAGCAAGGTTAA  
ACAGCTACCACTGGTGAAACCGTATTGCGTTTCAGTTTCAGAACCATAAACAAATCTGTGAATGAATCATTGAA  
CAATCTTTTTTATTACAGAAGAAGATTATCAGGCTCTGCGAACATCAATAGATGCTTATGACAACCTTTGACAATAT  
CTCGCTTGCTCAGCGTTTGGAAAAACATGAAGTCTGAGTTTCAGGAGAATTGCTGCTTATCTCTTCAAAGGCAA  
CAATCGCTGGAAACAGAGTGTAGAGCTGTGCAAGAAAGACAGCCTTTACAAGGATGCAATGCAGTATGCTTCTGA  
ATCTAAAGATACTGAATTGGCTGAAGAAGTCTGCAAGTGGTTTTTGCAGGAAGAAAAAGAGAGTGTCTTGGAGC  
TTGTCTGTTTACCTGTTACGATCTTTTAAAGGCCAGATGTGCTCCTAGAAACTGCATGGAGGCACAATATCATGGA  
TTTTGCCATGCCCTATTTTCATCCAGGTCATGAAGGAGTACTTGACAAAGGTGGATAAATTAGATGCTTCAGAATC  
ACTGAGAAAAGAAGAAGAACAAGCTACAGAGACACAACCCATTGTTTATGGTCAGCCCCAGTTGATGCTGACAGC  
AGGACCCAGTGTGCGCTCCCTCCCCAGGCACCTTTGGTTATGGTTATACCGCACCACCGTATGGACAGCCACA  
GCCTGGCTTTGGGTACAGCATGTCAGATGAAGCGCTGATCCTGTAGTCACCTATTTTCGTACTGAAACATCGTCT  
TTACCCACTTTCAGTTTTATAATGGGGGAAAACAGGCAACGTGTTCTTGTAACCTTTATTTTCATGAAGGACTTCT  
TTTTGTTTCTAACTATAAACTTGGATCACCTATGTTAAACCTTATTTTCACATTCCACATCATTTTAGAATTTAT  
TTTCGAAGGGGAATAGTTTCAATGTTTTATTCACTTGGGCTTTTTTTCTTCCCCCTCTTCTTTAAAGAACTGCT  
CAATATTCAATCTGTTGTGAAGAACCTGATTTGCACTCTGTAGTGTGTTAAAGAAACAAAGAACTCTAATATTGA  
ATCTCTTAAATTTAGTGTATGTAAACAGCTTACAAATACGTATTGTCTAAATGCATTTAAATCTGTTTTATTCAA  
AGAAAAGCTAAAGCAAAAACACTGGCATATGACCATGCAAGACTGTCAGTGCCAACAAAGACAACACTAATCAGC  
ACATCGTACACTGGATTGCAGTGCTTCCAGATTATTGAAAAATGTTACAGACAACCTGCCTGATTTTTAAATGA  
GCGTAAAAGGCCCTCTAACCTATGCAGGTTTCCCCATTATGCATATAGAAAATGCTAGTATGTTTTGCTCACTTC  
ATATGTAACAGGTGCCCTTATGTTGTGCTGTATCCTGTGCTTTTTCTGTGGGACCATTCCATTACAGGAGCAAAGA  
GCACCATGATTCCAATCTTGTGTGTTTTACTAACCTTCCCTGAGGCTTGTGTATGTGGATATTGTGGTGTGTT  
TAGATCACTGAGTGTACAGAAGAGAGAAATTCAAACAAAATATTGCTGTTCTTCAGTTTGTGTTGTGGAATTTGA  
AATTACTCAATTTAAATAAATTACTGGACTGTGG

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**FIGURE 4922**

MAQILPIRFQEHLLQLNLGINPANIGFSTLTMESDKFICIREKVGEQAQVVIIDMNDPSNPIRRPISADSAIMNP  
ASKVIALKAGKTLQIFNIEMKSKMKAHTMTDDVTFWKWISLNTVALVTDNAVYHWSMEGESQPVKMFDRHSSLAG  
CQIINYRTDAKQKWLTLTGISAQQNRVVGAMQLYSVDRKVSQPIEGHAASFAQFKMEGNAEESTLFCFAVRGQAG  
GKLHIIIEVGTPPTGNQPPFKAVDVFFPPEAQNDFPVAMQISEKHDVVFLITKYGYIHLYDLETGTCIYMNRI  
ETIFVTAPHEATAGIIGVNRKGQVLSVCVEEENIIPYITNVLQNPDLALRMAVRNNLAGAEELFARKFNALFAQG  
NYSEAAKVAANAPKGILRTPDTIRRFQSVPAQPGQTSPLLQYFGILLDQGQLNKYESLELCRPVLQQGRKQLEK  
WLKEDKLECSEELGDLVKSVDPTLALSIVLRANVPNKVIQCFQVQKIVLYAKKVGYPDWIFLLRNVMRIS  
PDQGGQFAQMLVQDEEPLADITQIVDVFMENLIQOCTAFLLDALKNNRPSEGPLQTRLLEMNLMHAPQVADAIL  
GNQMFTHYDRAHIAQLCEKAGLLQRALEHFTDLYDIKRAVVHTHLLNPEWLVNYFGSLSVEDSLECLRAMLSANI  
RQNLQICVQVASKYHEQLSTQSLIELFESFKSFEGLFYFLGSIVNFSQDPDVHFKYIQAACKTGQIKEVERICRE  
SNCYDPERVKNFLKEAKLTDQLPLIIVCDRDFVHDLVLYLRNNLQKYIEIYVQKVNPSRLPVVIGGLLDVDCS  
EDVIKNLILVVRGQFSTDELVAEVEKRNRLKLLLPWLEARIHEGCEEPATHNALAKIYIDSNNNPERFLRENPHY  
DSRVVGKYCEKRDPHLACVAYERGQCDELEINVCNENSLFKSLSRYLVRKDPPELWGSVLLESNPYRRPLIDQVV  
QTALSETQDPPEEVSIVTKAFMTADLPNELIELLEKIVLDNSVFSEHRNLQNLILITAIKADTRVMYINRLDNY  
DAPDIANIAISNELFEEAFAIFRKFDVNTSAVQVLEHIGNLDRAVEFAERCNEPAVWSQLAKAQLQKGMVKEAI  
DSYIKADDPSSYMEVVQAANTSGNWEELVKYLQMARKKARESYVETELIFALAKTNRLAELEEFINGPNNNAHIQQ  
VGDRCYDEKMYDAAKLLYNNVSNFGRLASTLVHLGEYQAAVDGARKANSTRWKEVCFACVDGKEFRLAQMCGH  
IVVHADELEELINYYQDRGYFEELITMLEAALGLERAHMGMTLAILYSKFKPKMREHLELFWSRVNIPKVL  
AAEQAHLWAEVLFLYDKYEEYDIAITMMNHPTDAWKEGQFKDIITKVANVELYYRAIQFYLEFKPLLLNDLLMV  
LSPRLDHTRAVNYFSKVKQLPLVKPYLRSVQNHNNKSVNESLNNLFITEEDYQALRTSIDAYDNFDNISLAQRLE  
KHELIEFRRIAAYLFKGNRWKQSVELCKKDSLYKDAMQYASESKDTELAEEELLQWFLQEEKRECFGACLFCTCYD  
LLRPDVVLETAWRHNIMDFAMPYFIQVMKEYLTKVDKLDASESLRKEEQATETQPIVYGQPQLMLTAGPSVAVP  
PQAPFGYGYTAPPYQGPQPGFGYSM

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**FIGURE 4923**

TTTCCAGCCCCGGCCCCGGACCCTGCAGCTGCAGAGATGTTGATGCCTAAGAAGAACTGGATTGCCATTTATGAA  
CTCCTTTTTTAAGGAGGGAGTCATGGTGGCCAAGAAGGATGTCCACATGCCTAAGCACCCGGAGCTGGCAGACAAG  
AATGTGCCCAACCTTCATGTCAATGAAGGCCATGCAGTCTCTCAAGTGCCGAGGCTACGTGAAAGAACAACCTTTGCC  
TGGAGACATTTCTACTGGTACCTTACCAATGAGTGTATCCAGTATCTCCGTGATTACCTTCATCTGCCCCGGAG  
ATTGTGCCTGCCACCCTACGCCGTAGCCGTCCAGAGACTGGCAGGCCTCGGCCTAAAGGTCTGTATATGAGGAGT  
GCTGTGCTACCTGGTGGCGACAAGAAAGCCGAGGCTGGGGCTGGGTCAGCAACCGAATTCTAGTTTAGAGGCGGA  
TTTGGTTGTGGACGTGGTCAGCCACCTCAGTAAACTGGAGAGGATTCTTTTGATTGAATAAATTTACAGCCAA  
AAAA



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**FIGURE 4924**

AACCGGCGCCAGCCATGGCCCTCTGGGGCGGGCGGAAGCTGGGGTCTGCTCCCCACCGCAGAGCGCAGTCCCGACGC  
CCTGGGTACCTTCTGTCAGCCCCCTCTCGTGGGCGGTCCACCTGCGCCCCCGCAGCCAGGCCGCGTGAAGGAAG  
ACCTGCTGGAACCTGATGCTGCAGAACGCGCAGATGCACCAGCTGCTGCTGAGTCGCTGTTGGTGGTGGAGCGC  
TGCAGCCCCGGCCTGCTGCCCCCTCAGGTCTACCTGGAGGTTCCACAGGAAGAGCCTGAGGAGGAGGAGG  
AGGAGATGGACGTGCGGGAGAAAGGGCCCTTTGGTGTTCACCACCACTACTTGCCCTATTTGATGCCCTCCCCGG  
GTGCCCTGCTGCCCTGGCCAGCCCCCTTCTTCCCCACCCTGCTTGTGAGCCCTACTTGCAGGACGTGCCAGGA  
TTCAGCACTGTCTGCTCCAGGAAAGGGAGGTGAGAGCTGTGCCCCACCCCCACCCCCAGTGCCACAGGGA  
CTGTGGGTGCTGATGTACCCCCGGCTTTCAGACTACTATGATGCCGAGAGCCTCTATAGGACAGACCCCCGGCCC  
TGGCACTGCACCAGCTTCTGCTCTGGATACAGCCCCGGAGCCGCTCCTGCACCTCTCTTGTGACTCCCCGG  
TCCCCATGGCTGGCAGTCTCTCACTCCCTCAACCTCAGCCAGGCCCTCTTCTCCTGGGGAAATCAGTCCCTGC  
CCCCAGCCAATGAGTTCTTGACGGGCCGGATCTGTGCTGTTGTGTAAGAGCTCCCTAGAGCACCACCCAGGCC  
TTGAAGCCACGTGAGCCCGCTCTGCCCCACTGCTTCTGCTGGAGCAGGGGGAGGCCTGGGAACAGAGCCCC  
ACCCTCTCTCCCTCACCCTCTCTCTGGGATGATGAGGTCTCTTCCAGCCTAGTAATGGAGCAAGAGGGGAGGG  
GGGGATTCTCTGCTTTCCACAGCTTTGAAGCCCCCTTTGAGGTGGCTGGAGGGGGCCAGAGTGGTGGGGGAGA  
GACTTTGTGGGCAGCGCCCCCTGAGCAGAGTCAGTTCGCTGGGCCCCCACCCTCATCCAGGAAGCAGCTCTG  
TTGGCAGAAAGGAGAGGTGAGAGCTTTGTCTGCTGTGGCCAGGAGTGGCCTGAGGTCTCCTGGGGCCAGGTGGG  
AACAGTGTGCTCTGCCCCCTGGGCCAGGGTGTGTTTCCCCCACCCTCCCTCAGTAGCAATGAGTACTCGGGC  
CAGATGGGGGCTGTTGCATGGGCTGGGAGGCCCTGTGAAGGAGAGGGTGGGGAGGGAGGCATCTAGGGAGAGG  
GGTCCCCCATGGTGGCTCCCCCTGGCCATTGTTATCCAGGAGGAGACACTGTGGGCACAGGGCTAAGTCCA  
GGTGTGTTGTATTGGGCTAGAAAAGCAATGTCCCAAGTCTCTGCTGCTGTGTCAGTCTTTCAGCCAGGGCTGG  
ACCTCAACCTGAGGAGTCACACTGAGTTCCAGTGACCACCGTGGTGGTGGCCATGCCACTCATGGTTGCTATGG  
CCGGAAGGCTGGGGCAGCCTCCTCCAAGCGCTCGCACCCCGTAGGTGCCATCCGCTGCTGGCGCAAGTGCTG  
GCCGAAGATGAAGCAGAGCAGGACAGATGTCAGAACAGGGACAGCAACACCGACACCACCGTGAATGATGAC  
CATCTGGCTGTCGACACAGGCTCTGGGGAGGGAGGGGGCAAGGGTCTTAGACGTCTGTGATCCAGTTACCAG  
GGACAAAAGGGAGTGGAAGTCCACCCCCAACCCAGACCCCCAGACCCCGCCGCCGCTCATGCATCCAGCAGTC  
ACCCAGTTGTCAGAGATGAGTGGTGAATGGTGTCTGCATTAAATATTATCTGGAAAAAGGTGGCCAGGGCT  
CAGGCTACCAGCTGGACTTCTGTGTGGCTGTGAGGGCAGATGTCCCTTGTGTCAGCAGCCATGGGACCAGTGTGTA  
GCTGCTGGACACCGTGGCCTGGAGGGTGGCATGGTCCCAGCCAAGCCCCCTTCTTGGGCAGAGCTGAGTGAATTCT  
ATGCCAGGCTCCCTGTGTGCGGCCGTCCAGGGTACCAAGCAGCAGAGCTCTGGGGACCTCAGTGGGGCAGTC  
AGGCCAACTTCTCATTGTGGAGGGGAGCCAAGGCCAGGGAGAGCCGTCAAGGTGATGGGGCTTGATGGTGGCCG  
AGGAACTAGTTGACCTCTCCCGACCTCTGGAGCAGTTGAGGTCCAAGCTGGGGACTTGGAAAGAACTTCAGGGAA  
GAGGGAGAGTAAGAGGGAAGCCTCAGGATGAAGGGTGGGCTCCTGGGTGTTTGCTTCCAAGTGGGACTCAAGAT  
TTTTCTTCCCCGAGGGGCTGAAAGTGACTTATCACTCCCACTCCATCCACGGATCCCCCTCACCATAGATCT  
CCAACATCTTCGGGGCTGAGTGTGTTGTGAAAGATGTTGCCACCGCGAGACATCAAGTCCAGCACAGCCAGGCAGG  
AGAAGTTGCGGTGGCCATCCTCTCTGTGAGCCGTGCTGTTGAATGTGGCTGTGGCTCCTGCGGAGCAGGGGCTG  
CCTTCCCGAAGGTCTCATAGTGCAGAGTCTCATTGCCACGGAACAGGAAGAGGGTGAGGCTGTCCAGGGGCTCCA  
CGGTGGGCACCTGCACTCAATGGTGAAGGACTTGCCACAGCCACCAAGTGGGTGTCAGTGTGAGGATGACCT  
GCCTTGGAGGCTCTGCAGGGGACAAAGGAGGGAGGTCTGGTCAGGATGGGGGTGAGTCCAGCAGCCTCCCCCT  
GGCCAGGGCCATCTCTGTACCATGGTGTTCACGGTTGGGGAGGAGGTGGCCTGGCCGGCTCCAGTGCAGAGA  
GGAAGAGGGCAGCAGTTGAGGATGAGGCTGGACTGTGTGGTAGTTTACAGACATGATGGTTTCCGGTGACCAG  
GTGTCTACAAGGACAAGGTTGAGAAATTGTACAGCCAAGTGGAAAGATATAAAAGTTGGGTCTGTCTCTCTCC  
TTCAGAAATGAAATATAAATTTCAAACATTAAACAGTTGGGTGATCACGTTG

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**FIGURE 4925**

MASGAGGSWGRSPQSAVPTPWVTFLOPLSWAVPPAPPQGRVKEDLLELMMLQNAQMHQLLSRLVAGALQPRP  
ASPCPQVYLEVPQEEPEEEEEEMDVREKGPLVFHHHYLPYLMPSGALLPWPAPFFPTPACQPYLQDVPRIQHCP  
ASREREVRAVPPPPPPSATGTVGADVPPASDYYDAESLL

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**FIGURE 4926**

GGCGGCCAAACCTCCGGAGGCCGGGGACGGAAGGCGGGCCCGCAGCAGATCCTGGATCCGGAATCTCCCGGGCAG  
GAGCGGAATCTGTCCCGAACCGGGTCTGTGAGGAACTCGCGAACTTGGATTAGGAAATCCCGGAGCCCGGATCGA  
CAATCCCGGAACCCGGAATTAAGATCGCCAAGTCCCGGATCGCGGAGCACAGAGCACGGAGTGGACTCGACGCG  
GAGCCCGGAGTCCGGATCGCGGCACCGCGGACGGGACGGAGCGATGTGCGGCCGAGGCGGGGCGGGTTCCCGC  
TGCCCCCGCTAAGCCCTGGCGGCGGCGCGTGGCTGCGGCCCTGGGAGCGCCGCTCCCCCGCGGGACCCGGCA  
TGCTGCCCCGACCGCGCTCCGGGGACCGGGTCCGGCAGGAGGCGTGGGGGGCCCCGGGGCGCGCCTTCCGCC  
CCATGGGCCCCGCGGGCCCCGCGGCGCAGTACCAGCGACCTGGCATGTACCAGGGAACCGGATGCCCATGGCTG  
GCTTGACAGGTGGGACCCCTGCTGGCTCCCCATTGGTGCAGCAGCTCCGCTTCGACCTGGCATGCCACCCACCA  
TGATGGATCCATTCCGAAAACGCCTGCTTGTGCCCCAGGCGCAGCCTCCCATGCCTGCCAGCGCCGGGGGTAA  
AGAGGAGGAAGATGGCAGATAAGGTTCTACCTCAGCGAATCCGGGAGCTTGTTCAGAGTCTCAGGCGTACATGG  
ATCTCTTGGCTTTTGAGCGGAAGCTGGACCAGACCATTGCTCGCAAGCGGATGGAGATCCAGGAGGCCATCAAAA  
AGCCTCTGACACAAAAGCGAAAGCTTCGGATCTACATTTCCAATACGTTTCTAGTCCCAGCAAGCGGAAGGCGATA  
GTGCAGGAAGTGCAGGGACCCCTGGGGGAACCCAGCAGGGGACAAGGTGGCTTCTTGGGAAGTCCGAGTGGAAAG  
GAAAGTCTGCTGGATGATCTAGCAAACAGAAGAGGAAGTTTCTTCTATTCTTAAGAGCCTCGTCATTGAGCTGG  
ACAAGGAGCTGTACGGGCTGACAATCACCTGGTGGAGTGGCACCGGATGCCACCACCCAGGAGACAGATGGCT  
TCCAAGTAAAACGGCCTGGAGACCTCAACGTCAAGTGCACCTCTCTGCTCATGCTGGATCATCAGCCTCCCCAGT  
ACAAATTGGACCCCCGATTGGCAAGGCTGCTGGGAGTGCACACGACAGAGGGCCGCCATCATGCAGGCCCTGT  
GGCTTTACATCAAGCACAAACAGCTGCAGGATGGGCACGAGCGGGAGTACATCAACTGCAACCGTTACTTCCGCC  
AGATCTTCAGTTGTGGCCGACTCCGTTTCTCCGAGATTCCCATGAAGCTGGCAGGGTTGCTGCAGCATCCAGACC  
CCATTGTCATCAACCATGTCATTAGTGTGACCCCTAACGACCAGAAGAAGACAGCCTGTTACGACATCGATGTGG  
AGGTGGACGACCCACTGAAGGCCCAAATGAGCAATTTTCTGGCCTCTACCACCAATCAGCAGGAGATCGCCTCCC  
TTGATGTCAAGATCCATGAGACCATTGAGTCCATCAACAGCTGAAGACCCAGAGAGATTTTATGCTCAGTTTTA  
GCACCGACCCCCAGGACTTCATCCAGGAATGGCTCCGTTCCGACGCGGAGACCTCAAGATCATCACTGATGTGA  
TTGGAAATCCTGAGGAGGAGAGACGAGCTGCTTCTACCACCAGCCCTGGGCCAGGAAGCAGTAGGCAGGCACA  
TCTTTGCCAAGGTGCAGCAGCGAAGGCAGGAAGTGAACAGGTGCTGGGAATTCGCCTGACCTAACTGCTCAGGG  
ATCTTTCTTCCAGCCCTGGAGCCTGGAGGGAGACCACCTCTGGGTCTTGCTGGGGCCGACAGACAGTAGGCT  
GGGGTGAGGAGTGTCTGCTGTACCCCTCTACTCTCCAGCTTTAGTCTTATAAATGTAGTGATAGGATTCTTGT  
GCTTGGTCCCCAAAGCCTTATACTTTTTGCATTGGCTTTAATTGGGTTTACGAGATGCCTCCTCTGCCCCCTGC  
AGGCAGGCCCAAGTAGGACTGCTGGAGGCTGTGCTTTGACATTGTAAGACATTTCCGAACCAAAGGCTGCTGGGT  
TTGCATGTTTACAGACTCCCCCTGGGGCGAGGGTCAGAGCTGGCTCTGGGGAGCTGGGCTAGGAAGAGGAGGTGC  
AGCCCAGACTCTTCTAGCCTTTCTAAACCAAAGTTCTTTGCCATTCTTACAAGCCCAGCCTTGCTGCTGGTTTT  
TTCCTTTCTTTGGGTATTTGCACTATTTTGGGAGCAAGTTTTCTATGTGGGAGCCACTTTTTTTGTACAGGGGT  
AAGTTGGGGTTTTTCAGGGAGCCTGTTAGGTGCCCTCCTTCTTTTCTTCTCAATCTATGCAAGCGGCTCTGGCC  
GCCATCATCTCTGGGATGCCAGAGGGCTGCCCTCCAGCGGCTTGGGCCGGGGAGGGGACACTCCAGTTCTCTA  
GCATGGCCTGAGGTATGGGGTATGTGCATGTGGAGGCCAGGGTAAGGTGAATGGGGAGGCTGGGAGGACTGGTGT  
TGCCCTTTGGAGCTTGGTGAGGAGGGTGGGCCTAGGGCTTGGCGAGTGCCACATCTGGCAGGTTTGAAATTTCC  
AAATAATCCTTTTGTCT

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**FIGURE 4927**

ATGGCGCTTGACGGACCAGAGCAGATGGAGCTGGAGGAGGGGAAGGCAGGCAGCGGACTCCGCCAATATTATCTG  
TCCAAGATTGAAGAACTCCAGCTGATTGTGAATGATAAGAGCCAAAACCTCCGGAGGCTGCAGGCACAGAGGAAC  
GAACTAAATGCTAAAGTTCGCCTATTGCGGGAGGAGCTACAGCTGCTGCAGGAGCAGGGCTCCTATGTGGGGGAA  
GTAGTCCGGGCCATGGATAAGAAGAAAAGTGTGGTCAAGGTACATCCTGAAGGTAAATTTGTTGTAGACGTGGAC  
AAAAACATTGACATCAATGATGTGACACCCAATTGCCGGGTGGCTCTAAGGAATGACAGCTACACTCTGCACAAG  
ATCCTGCCCCAACAAGGTAGACCCATTAGTGTCACTGATGATGGTGGAGAAAGTACCAGATTCAACTTATGAGATG  
ATTGGTGGACTGGACAAACAGATCAAGGAGATCAAAGAAGTGATCGAGCTGCCTGTTAAGCATCCTGAGCTCTTC  
GAAGCACTGGGCATTGCTCAGCCCCAAGGGAGTGCTGCTGTATGGACCTCCAGGCAGTGGGAAGACACTGTTGGCC  
CGGGCTGTGGCTCATCATACGGACTGTACCTTTATTCGTGTCTCTGGCTCTGAAGTGGTACAGAAATTCATAGGG  
GAAGGGGCAAGAATGGTGAGGGAGCTGTTTGTTCATGGCACGGGAACATGCTCCATCTATCATCTTCATGGACGAA  
ATCGACTCCATCGGCTCCTCGCGGCTGGAGGGGGGTTCTGGAGGGGACAGTGAAGTGCAGCGCACGATGCTGGAG  
TTGCTCAACCAGCTCGACGGCTTTGAGGCCACCAAGAACATCAAGGTTATCATGGCTACTAATAGGATTGATATC  
CTGGACTCGGCACTGCTTCGCCCAGGGCGCATTGACAGAAAAATTGAATTCCCACCCCCCAATGAGGAGGCCCGG  
CTGGACATTTTGAAGATTCAATTCTCGGAAGATGAACCTGACCCGGGGGATCAACCTGAGAAAAATTGCTGAGCTC  
ATGCCAGGAGCATCAGGGGCTGAAGTGAAGGGCGTGTGCACAGAAGCTGGCATGTATGCCCTGCGAGAACGGCGA  
GTCCATGTCACTCAGGAGGACTTTGAGATGGCAGTAGCCAAGGTCATGCAGAAGGACAGTGAGAAAAACATGTCC  
ATCAAGAAATTATGGAAGTGAGTGGACAGCCTTTGTGTGTATCTCTCCAATAAAGCTCTGTGGGCCAAGTC

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**FIGURE 4928**

MALDGPEQMELEEGKAGSGLRQYYLSKIEELQLIVNDKSQNLRRQLQAQRNELNAKVRLIREELQLLQEQGSYVGE  
VVRAMDKKKVLVKVHPEGKFVVDVDKNIDINDVTPNCRVALRND SYTLHKILPNKVDPLVSLMMVEKVPDSTYEM  
IGGLDKQIKEIKEVIELPVKHPELFEALGIAQPKGVLVLYGPPGTGKTLLARAVAHHTDCTFIRVSGSELVQKFIG  
EGARMVRELFVMAREHAPSIIFMDEIDSIGSSRLEGGSGGDSEVQRTMLELLNQLDGFEATKNIKVIMATNRIDI  
LDSALLRPGRIDRKIEFPPPNEEARLDILKIHSRKMNLTGRINLRKIAELMPGASGAEVKGVCTEAGMYALRERR  
VHVTQEDFEMAVAKVMQKDSEKNMSIKKLWK

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FIGURE 4929

ATACTTGTCGGTTCCAAGTGTGGAGAAAGCGGCTCTGGGTCTAGATTGAGGGATACTCCCCCTTTCCACCATGG  
GCAAGAAGGGCAAAGTTGGCAAGAGCCGACGAGACAAGTTTTATCACTTGGCGAAGGAGACGGGTTACCGTTCCC  
GATCTGCTTTCAAGCTGATCCAGCTCAATCGCCGCTTTAGTTCTGCAGAAAGCCCAGCCCTTGCTGGACCTGT  
GTGCTGCGCCAGGGGGATGGCTGCAGGTAGCTGCCAAGTTTATGCCTGTATCCAGCCTTATTGTGGGAGTGGACC  
TGGTTCCAATCAAGCCTCTCCCCAATGTGGTGACTCTCCAGGAGGACATCACAAACAGAACGTTGTAGGCAGGCC  
TGAGGAAGGAGCTGAAGACCTGGAAGGTTGATGTTGTGCTCAATGATGGGGCCCCAACGTTGGGGCTAGCTGGG  
TCCATGATGCTTACTCACAAAGCCATTTGACACTGATGGCTCTACGTTTGGCTTGTGACTTTTTGGCCCGTGGTG  
GCAGCTTCATCACAAAGGTTTTCCGTTCTCGTGACTATCAGCCTCTGCTATGGATCTTTCAGCAGCTGTTCCGCC  
GTGTCCAGGCCACCAAGCCCCAAGCCTCTCGCCATGAATCTGCAGAGATCTTGTAGTCTGCCAAGGATTCCTGG  
CCCCTGACAAGGTTGACAGTAAATTCTTTGACCCCAAATTTGCCTTTAAGGAGGTTGAAGTTCAGGCTAAGACCG  
TTACTGAATTGGTTACTAAGAAGAAGCCAAAGGCTGAAGGCTATGCTGAGGGTGACCTCACTCTCTATACCGTA  
CCTCAGTCACTGACTTCTCCGAGCTGCCAACCTGTTGACTTCTCTCCAAGGCCAGCGAAATCATGGTAGATG  
ATGAAGAGTTGGCACAGCATCCAGCTACCCTGAGGACATACGGGTGTGCTGTCAGGACATCAGAGTGTGGGGC  
GCAAGGAGCTCAGGTCGCTACTAACTGGAGAACAAAACCTCGGCGATATGTGGCCAAAGAAGCTGAAAGAACAAG  
CAAAGGCACTGGACATCAGCCTCAGCTCTGGAGAGGAAGATGAAGGTGATGAGGAGGACTCAACAGCTGGAACCA  
CAAAGCAGCCCTCTAAGGAGGAGGAGGAAGAGGAGGAGGAGGAACAACCTGAACCAGACCTTGGCAGAAATGAAGG  
CCCAGGAGGTGGCGGAATTGAAGAGGAAGAAAAAGAAGCTGTTGCGTGAGCAGAGAAAGCAGCGGGAGCGTGTGG  
AGCTGAAGATGGATCTGCCTGGGGTTTTCCATTGCAGACGAGGGGGAGACTGGCATGTTCTCTTGTGCACCATCC  
GGGGTCACCAAGTTATTAGAGGAAGTAACACAAGGGGATATGAGTGCAGCAGACACATTTCTGTCCGATCTGCCAA  
GGGATGATATCTATGTGTGATGTTGAGGACGACGGTGATGACACATCTCTGGATAGTGACCTGGATCCAGAGG  
AGCTGGCAGGAGTCAGGGGACATCAGGGTCTAAGGGACCAAAGCGTATGCGACTTACTGAAGTGAAGATGATA  
AAGAGGAGGAGGAGGAGGAATCCACTGCTGGTACCCTGGAGGAAAAGGCAGTACTGCAGGAAGAACAAGCCA  
ACCTGTGGTTCTCAAAGGGCAGCTTTGCTGGGATCGAGGACGATGCCGATGAGGCCCTGGAGATCAGTCAGGCC  
AGCTGTTATTGAGAACC CGCGGAAGGGACGGCAGCAGCAGCAGAAGCAGCAGCTGCCACAGACCCCCCTTCCT  
GTTTGAAGACTGAGATAATGTCTCCCTGTACCAAGATGAAGCCCCTAAGGGAACAGAGGCTTCTCGGGGACAG  
AAGCTGCCACTGGCCTTGAAGGGGAAGAAAAGGATGGCATCTCAGACAGTGATAGCAGTACTAGCAGTGAGGAAG  
AAGAGAGCTGGGAACCCCTCCGTGGTAAGAAGCGAAGCCGTGGGCCTAAGTCAGATGATGACGGGTTTGAGATAG  
TGCCTATTGAGGACCCAGCGAAACATCGGATACTGGACCCCGAAGGCCTTGCTCTAGGTGCTGTTATTGCCTCTT  
CCAAAAGGCCAAGAGAGACCTCATAGATAACTCCTTCAACCGGTACACATTTAATGAGGATGAGGGGGAGCTTC  
CGGAGTGGTTTGTGCAAGAGGAAAAGCAGCACCGGATACGACAGTTGCCTGTTGGTAAGAAGGAGGTGGAGCATT  
ACCGGAAACGCTGGCGGGAATCAATGCACGTCCCATCAAGAAGGTGGCTGAGGCTAAGGCTAGAAAGAAAAGGA  
GGATGCTGAAGAGGCTGGAGCAGACCAGGAAGAAGGCAGAAGCCGTGGTGAACACAGTGGACATCTCAGAACGAG  
AGAAAGTGGCACAGCTGCGAAGTCTCTACAAGAAGGCTGGGCTTGGCAAGGAGAAACGCCATGTCACCTACGTTG  
TAGCCAAAAAAGGTGTGGGCCGCAAAGTGCGCCGGCCAGCTGGAGTCAGAGGTCATTTCAAGGTGGTGGACTCAA  
GGATGAAGAAGGACCAAAGAGCACAGCAACGTAAGGAACAAAAGAAAAACACAAACGGAAGTTAAGCAGAGCTGC  
CAGGCTCCAGGAGAGCATGGGGACTAGGAGGAAGGGTGTGGCATGGCTCAGTCTGCCCCCTTGATTACCGGCC  
TAGCCCTGCTCACATCACAGCTGTCTGAAGAACAGTGAGGTGGAGTGCCTAGAACTCCCGTGGTGGTCTGAGC  
AGAGAGGAGGATGTCTCTGCTGCTGAAGGTCTCCCATGAAAACACTGCTGAAGTGTGTTGACACTCATGAC  
CCTTTTTTTAAACCGTTAAAGGGAAGTTCGGTGTGGAGCGATACTCAATGTAGTCAGTCTACACCTGGACGTGT  
GGGCCACTTAAGCCCTCCCAACCCCATCCTATTCTAAATAAAACCAGGATAATGGAAAAA

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**FIGURE 4930**

MGKKGKVGKSRRDKFYHLAKETGYRSRFAFKLIQLNRRFQFLQKARALLDLCAAPGGWLQVAAKMPVSSLIIVGV  
DLVP IKPLPNVVTLQEDITTERCRQALRKELKTWKVDVVLNDGAPNVGASWVHDAYSQAHLTLMALRLACDFLAR  
GGSFITKVFRSRDYQPLLWIFQQLFRRVQATKQASRHESAEIFVVCQGFLAPDKVDSKFFDPKFAFKEVEVQAK  
TVTELVTKKKPKAEGYAEGDLTYHRTSVTDFLRAANPVDFLSKASEIMVDDEELAQHPATTEDIRVCCQDIRVL  
GRKELRSLNWRTKLRRYVAKKLKEQAKALDISLSSGEEDEGDEEDSTAGTTKQPSKEEEEEEEEEQNLQTLAEM  
KAQEVaelkrkkkllreQRKQREVELKMDLPGVSIADGETGMFSLCTIRGHQLLEEVtQGdmsaadtFLSDl  
PRDDIYVSDVEDDGDDTSLDSLDPEELAGVRGHQGLRDQKRMRLTEVQDDKEEEEEENPLLVPLEEKAVLQEEQ  
ANLWFSKGSFAGIEDDADEALEISQAQLLFENRRKGRQQQKQQLPQTPPSCLKTEIMSPLYQDEAPKGTEASSG  
TEAATGLEGEEKDGISDSSTSSSEEEESWEPLRGKKRSRGPKSDDDGFEIVPIEDPAKHRIIDPEGLALGAVIA  
SSKKAKRDLIDNSFNRYTFNEDEGELPEWVQEEKQHRIQLPVGKKEVEHYRKRWREINARPIKKVAEAKARKK  
RRMLKRLEQTRKKAeAVVNTVDISEREKVAQLRSlyKKAGLGKEKRHVtYVvAKKGvGRKvRRPAGVRGHfKvVD  
SRMKKDQRAQQRKEQKKKHKRK

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**FIGURE 4931**

ATCCCTTGGAGGCATTCATGGCTGAAGTGGAGGATCAGGCAGCTAGAGACATGAAGAGGCTTGAAGAAAAGGACA  
AGGAAAGAAAAAACGTAAAGGGTATTTCGAGATGACATTGAAGAGGAAGATGACCAAGAAGCTTATTTTCGATACA  
TGGCAGAAAAACCAACTGCTGGTGTGGTTTCAGGAGGAAGAGGAAGACAATCTAGAATATGATAGTGACGGAAATC  
CAATTGCACCTACCAAAAAATCATTGATCCTCTTCCCCCATTGATCATTGAGAGATTGACTATCCACCAATTTG  
AAAAAACTTTTACAATGAGCATGAAGAGATAACCAACCTCACTCCACAGCAGTTAATAGATCTCCGGCATAAGC  
TCAATCTTCGGGTCTCTGGTCTGCACCTCCTAGACCAGGAAGTAGCTTTGCTCATTTTGGGTTTGACGAACAAC  
TTATGCCACCAGATTTCGAAATCTGAATACACAGCCCCACTCCAATACAGTGCCAGGGTGTGCTGTGGCATTAA  
GTGGTAGAGACATGATTGGTATTGCCAAAACAGGTAGTGGGAAAAGTGCAGCCTTCATTTGGCCCATGTTGATT  
ATATAATGGACCAGAAGGAGTTGGAACCAGGTGATGGACCAATTCAGTGATTGTGTCTTACCAGGGAGCTTT  
GCCAGCAGATCCATGCAGAAATGAAGCGGTTTGGAAAAGCATATAATCTTCGATCAGTGGCCGTATATGGAGGAG  
GGAGTATGTGGGAGCAGGCCAAGGCCCTTCAGGAGGGGGCAGAGATTGTTGTGTGTACCCAGGTGACTGATAG  
ATCATGTGAAAAAGAAAGCTACCAATCTTCAAGAGTCTCTTACCTTGTGTTTGTATGAAGCAGATCGAATGTTTG  
ACATGGGATTGAGTACCAAGTTTCGATCCATAGCAAGTCATGTTTCGTCTGACAGGCAGACTCTCTTATTTAGTG  
CAACTTTTCGAAGAAGATTGAAAAGTTGGCCAGAGACATCCTGATCGACCCTATTTCGAGTGGTGCAGGGAGATA  
TTGGAGAGGCAAAATGAAGATGTGACACAGATTGTGGAGATTCTCCATTCTGGACCTAGTAAATGGAAGTGGCTTA  
CCCGGCGTCTGGTAGAATTTACCTCTTCAGGGAGTGTCTCTCTTTGTTACTAAAAAGCCAATGCTGAAGAGC  
TAGCGAATAACCTTAAACAGGAGGGTTCATAATCTTGGGCTGCTCCATGGGGATATGGATCAGAGTGAGAGAAACA  
AGGTCAATTTAGACTTTAAGAAAAAGGACATCCAGTCTTGGTGGCCACAGATGTTGCAGCCCGTGGTCTGGACA  
TTCCTTCAATTAAGACTGTCTAATACTATGATGTGGCAGGACATTGATACCCACACGCATAGGATTGGCCGCA  
CAGGAAGAGCGGGTGAAGAGGTGTGGCCTATACCTACTCACTCCCAAGGACAGCAATTTTGTGGTGACCTGG  
TCCGGAACCTTGAAGGAGCCAATCAACACGTTTCTAAGGAACCTCTAGATCTGGCAATGCAGAATGCCTGGTTTC  
GGAAATCTCGATTCAAAGGAGGGAAAGGAAAAAGCTGAACATTGGTGGAGGAGGCCTAGGCTACAGGGAGCGGC  
CTGGCCTGGGCTCTGAGAATCGGATCGAGGAATAACAATGTAATGAGCAATTATGAGGCCTACAAGCCTTCCA  
CAGGAGCTATGGGAGATCGACTAACGGCAATGAAAGCAGCTTTCAGTCACAGTACAAGAGTCACTTTGTGTCAG  
CCAGTTTAAGTAATCAGAAGGCTGGAAGTTCTGCTGCTGGGGCAAGTGGGTGGACTAGTGCAGGGAGCTTGAATT  
CTGTTCCAATACTCAGCACAAACAGGGCCATAACAGTCTTGACAGCCCCGTCACCAGTGCCGCCAAGGGCATCC  
CAGGCTTTGGCAATACTGGCAACATCAGTGGTGGCCCTGTGACCTACCCGCTGCGCGGAGCCCAAGGAGTCAACA  
ACACAGCTTCAGGGAATAACAGCCGAGAAGGGACTGGGGGCAGCAACGGGAAAAGAGAGATATACTGAGAACC  
GGGGCAGCAGCCGTCACAGTCACGGAGAGACTGGCAATCGGCATAGCGATAGTCCACGTACGGAGATGGTGGT  
CGCCATGGAGATGGATACCGCCATCCAGAAAGCAGCAGCCGTCATACTGATGGCCATCGGCACGGGGAGAACAGA  
CATGGAGGAAGCGCAGGCCGGCATGGGGAGAACCGGGGTGCAATGATGGTCGGAATGGGGAAAGCAGGAAAGAA  
GCTTTTAATCGTGAGAGCAAGATGGAGCCCAAGATGGAACCCAAAGTGGACAGCAGCAAGATGGACAAGGTGGAC  
AGCAAGACAGATAAGACAGCTGACGGCTTTGCTGTCCAGAGCCGCTAAACGCAAGAAAAGTCGATGGGACAGT  
TAGAGGGGATGTGCTAAAGCGTGAAATCAGTTGCTCTTAATTTTAGAAAAGATTTGGTAACTAGGTGTCTCAGG  
GCTGGGTGGGGTCCAAAGTGAAGGACCCCTGCCCTTAGTGGAGAGCTGGAGCTGGAGACATTACCCCTTCA  
TCAGAAGGAATTTTCGGATGTTTTCTTGGGAAGCTGTTTTGGTCTTGGAAAGCAGTGAGAGCTGGGAAGCTTCTT  
TTGGCTCTAGGTGAGTTGTCTATGTGGGTAAGTTGAGGTTATCTTGGGATAAAGGTCTTCTAGGGCACAAAATC  
ACTCTAGGTTTATATTGTATGTAGCTTATATTTTACTAAGGTGTCACCTTATAAGCATCTATAAATTGACTTC  
TTTTTCTTAGTTGTATGGCCAGGCAGTCCCCATTTAGGAGTTGGCTTCTGCAATTCATCCATTGAGCTAACT  
GTTGGGGAGCAATTTGGTAGTTGTAGACATTTGCAGGGAAGGGAGATGTCTGATTCTAAATGGGAGTTGATGCTC  
AGGTCCCCAGCCAGGTTTGCATCCAGCCCTGAGACATGTAGGAAACACCTTTAGACCCAGGCTCTGAAGATTCC  
CAGAAGCCACAAGGATTGAAGGGAAGAGGTGATCCTGGTAACTGTCCAGGATTGCTCCAGGTTTGAGATGGTAT  
TGCTAAATTTAAATTAACAAGAAACCCAAACAGCTTTTAAAGTGCTCTTCTATCTCATTGTATTTTTTTAA  
CTTGCCCAATGATAGAAAAGTCTTTTGCTGAAATGATTTTGATGATTTTGTATATCGTTTATAAAAAGGAAAA  
GAAATATACAACTTTGACTTTTGTGAAAAAAGGAAAAA



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**FIGURE 4932**

MAEVEDQAARDMKRLEEKDKERKNVKGIRDDIEEEDDQEAYFRYMAENPTAGVVQEEEDNLEYDS DGNPIAPTK  
KIIDPLPPIDHSEIDYPPFEKNFYNEHEEITNLTPQQLIDLRHKLNLRVSGAAPPRPGSSFAHFGFDEQLMHQIR  
KSEYTQPTPIQCQGVVALSGRDMIGIAKTGSGKTAAFIWPMLIHIMDQKELEPGDGPIAVIVCPTRELCQQIHA  
ECKRFGKAYNLRSAVYGGGSMWEQAKALQEGAEIVVCTPGRLIDHVKKKATNLQRVSYLVFDEADRMFDMGFY  
QVRSIASHVRPDRQTLLFSATFRKKIEKLARDILIDPIRVVQGDIGEANEDVTQIVEILHSGPSKWNWLTRLVE  
FTSSGSVLLFVTKKANAEELANNLKQEGHNLGLLHGDMDSERNKVISDFKKKDIPVLVATDVAARGLDIPSIT  
VINYDVARIDIDTHTRIGRTGRAGEKGVAYTLLTPKDSNFAGDLVRNLEGANQHVSKELLDLAMQNAWFRKSRFK  
GGKGKKNIGGGGLGYRERPGLGSENMDRGNNVMSNYEAYKPSTGAMGDRLTAMKAQFSQYKSHFVAASLSNQ  
KAGSSAAGASGWTSAGSLNSVPTNSAQQGHNSPDSPVTSAAKGIPGFGNTGNI SGAPVTYPSAGAQQVNNTASGN  
NSREGTGGSNGKRERYTENRGSSPSQSRRDWQSA

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**FIGURE 4933**

CCGCCGCCGGGCCCCCGGCATGCAGCCCCGGCTGCGGAGGTGACACTCACGGACCTTAGCCACCGCCGCCCA  
TCGCCACCATGGACGAACAGGAGGCATTGAACTCAATCATGAACGATCTGGTGGCCCTCCAGATGAACCGACGTC  
ACCGGATGCCTGGATATGAGACCATGAAGAACAAGACACAGGTCACCTCAAATAGGCAGAGTGACGTCAGAATCA  
AGTTCGAGCACAACGGGGAGAGGCGAATTATAGCGTTACGCCGGCCTGTGAAATATGAAGATGTGGAGCACAAGG  
TGACAACAGTATTTGGACAACCTCTTGATCTACATTACATGAACAATGAGCTCTCCATCCTGCTGAAAAACCAAG  
ATGATCTTGATAAAGCAATTGACATTTTAGATAGAAGCTCAAGCATGAAAAGCCTTAGGATATTGCTGTTGTCCC  
AGGACAGAAAACCATAACAGTTCTCTCCCCACTCTGAGGTGTCCAGACAGGTGCGGATCAAGGCTTCCCAGTCCG  
CAGGGGATATAAATACTATCTACCAGCCCCCGAGCCAGAACGAGGCACCTCTCTGTGAGCTCCAGAACCTG  
GCCGAAGCTCACCTCCCCCTGGCTATGTTCTGAGCGGCAGCAGCACATTGCCCGGCAGGGGTCTACACCAGCA  
TCAACAGTGAGGGGGAGTTCATCCCAGAGACCAGCGAGCAGTGATGCTGGATCCCCCTGAGCAGTGACAGAAATT  
CCTTGCTGGAAGCTGCCAATCCTTGGACAGGTGAGCAGACAGCCCATCCTTCCGGAAATCACGAATGTCCCGTG  
CCCAGAGCTTCCCTGACAACAGACAGGAATACTCAGATCGGGAAACTCAGCTTTATGACAAAGGGGTCAAAGGTG  
GAACCTACCCCCGGCGTACCACGTGTCTGTGCACCACAAGGACTACAGTGATGGCAGAAGAATTTCCCCGAA  
TACGGCGTCATCAAGGCAACTTGTTCACCTGGTGCCCTCCAGCCGCTCCCTGAGCACAATGGCGAGAATGG  
GTCTGGCTGTGCAATACCTGGACCCCCGTGGGCGCCTGCGGAGTGCGGACAGCGAGAATGCCCTCTCTGTGCAGG  
AGAGGAATGTGCCAACCAAGTCTCCAGTGCCCCCATCAACTGGCGCCGGGAAAGCTCCTGGGCCAGGGTGCCT  
TCGGCAGGGTCTATTTGTGCTATGACGTGGACACGGGACGTGAACCTTGCTTCCAAGCAGGTCCAATTTGATCCAG  
ACAGTCTGAGACAAGCAAGGAGGTGAGTGCTCTGGAGTGCGAGATCCAGTTGCTAAAGAATTCAGCATGAGC  
GCATCGTGCACTACTATGGCTGTCTGCGGGACCGCGTGTGAGAAGACCCTGACCATCTTCATGGAGTACATGCCAG  
GGGGCTCGGTGAAAGACCAGTTGAAGGCTTACGGTGCTCTGACAGAGAGCGTGACCCGAAAGTACACGCGGCAGA  
TCCTGGAGGGCATGTCTACCTGCACAGCAACATGATTGTTACCGGGACATTAAGGGAGCCAACATCTCCGAG  
ACTCTGCTGGGAATGTAAAGCTGGGGGACTTTGGGGCCAGCAAACGCCTGCAGACGATCTGTATGTGCGGGACGG  
GCATGCGCTCCGTACTGGCACACCCTACTGGATGAGCCCTGAGGTGATCAGCGCGAGGGCTATGGAAGGAAAG  
CAGACGTGTGGAGCCTGGGCTGCACTGTGGTGAGATGTGACAGAGAAACCACCGTGGGCAGAGTATGAAGCTA  
TGGCCGCCATCTTCAAGATTGCCACCCAGCCACCAATCTCAGCTGCCCTCCACATCTCTGAACATGGCCGGG  
ACTTCTGAGGCGCATTTTGTGGAGGCTCGCCAGAGACCTTCAGCTGAGGAGCTGCTCACACACCCTTTGCAC  
AGCTCATGTACTGAGCTCTCACGGCCACACAGCTGCCGCTGCCCTTTGCTGCATGGCAGGGGGCTGCTGCTGGG  
CTCAGTGAAGTTGCTGCTTCTCCCAGGCAAGGCTGTGGACCATGGAGTGGCAGCCAGCCAGCGTCGGTCTGTGC  
CCCTTCCGCCACTGGGGCTCAGAGCCGGGGTGGGGTGGCTGCAGCCTCAGGACTGGGAGCCCCAGCCTGTGAGA  
TCCAGGAGCTCCAGTGTCTGAGCTCAGCGTGGAGGGGTAGGGGCTGGGAACAGTGTGCAAGGCAGCCGTGGGCC  
CCACCTCGGGGATGTGCTCTGACACTGCAATTGGCACCGAAGCCAGAGGGTCTGGGGGCACAAGACTGACGCC  
AGGGTATGAAGAGTGTATTTTCAATCAAAGTGTATTTTGTCTTTTCTTCCAATGTCTGGAGACCACAGGGCA  
TCTCTGGGCTGGATGAGCTCCACAAGCCTGAGGGAAAGGCCAGCACTCGCTAGCAGTGGCAGGCAGAGGCCAG  
GCTGCCGTCCCTAGAGTCCAGGTTGGCTCTGCCAGTCTGTCTTTACCAAAGATGAATGAAGCAAATGTCAT  
GCTGCCTTATTAGGGAAGGAGGACCTGTCTGCTGTGGCCATGACCCTGCCTCTCCAGGCAGGGGCCCCGG  
ATGTGGAACCTGCTGCCACTGAGGGGGGATCCAGTTTTGTCAATGCAGTTGTCTCTGTTTTACAAGTTGGAGTAC  
TCTTATGCTGTACCCAGTTTCTAACTGGAGACTGTGTGTCCTCTGGGCTCTGAGTACCCCTGCTTTGGGCTT  
GGGCTTAGGCTGCATTGAAAAGAGCTGAAGGTTGTGGCTTTGCGCTCCTGGCCAGCCTTTGTTCCCCACTGGA  
GCAGAAGGGGAGATGGACGACACGGTGGGGGCATCTGGCCTGGCCAGTGCCCTGATCCAGAGAGCCCGAGGAGG  
TGCTCAGGCTGCCTGAGTCGTGACCTGCTAGGCCAGAGCCCACTCCATCTGGTAGAAGGGAAAGCCCATATGCT  
ACCACCAGCTGTGTCCAAAACCGCAGCTCTGTTCTTCTCAGCCAGCCTCGCCCATCCCTTGAGGTCTCAGCC  
CCTTTCCCTTGTAGCTCCTCCCTGGAGGGGGAATGGCAGCAGGGGTGGGGAAACAGCATCTCCAAGCAGCTTA  
GAGTTGGCCATATTACCTCAGCTGGGCGCTGGTCTTTCTTCCGGCCCCCTCCCTCCAAAATGTGCCTATTGC  
TAGAGCTCCTCCCTCTCAACACCCAGTTTCTTGGGAGTTGTCAATTAAGGAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4934**

MDEQEALNSIMNDLVALQMNRRHRMPGYETMKNKDTGHSNRQSDVRIKFEHNGERRIIAFSRPVKYEDVEHKVTT  
VFGQPLDLHYMNNELSILLKNQDDLDKAIDILDRSSSMKSLRILLLSQDRNHNSSSPHSEVSRQVRIKASQSAGD  
INTIYQPPEPRSRHLSVSSQNPGRSSPPPGYVPERQQHIARQGSYTSINSEGEFIPETSEQCMLDPLSSAENSLS  
GSCQSLDRSADSPSFRKSRMSRAQSFPDNRQEYSDRETQLYDKGVKGGTYPRRYHVSVHHKDYS DGRRIFPRIRR  
HQQNLFTLVPSSRSLSTNGENMGLAVQYLDPRGRLRSADSENALSVQERNVPTKSPSAPINWRRGKLLGQAFGR  
VYLCYDVDTGRELASKQVQFDPDSPETSKEVSALECEIQLLKNLQHERIVQYYGCLRDRAEKTLTIFMEYMPGGS  
VKDQLKAYGALTESVTRKYTRQILEGMSYLHSNMIVHRDIKGANILRDSAGNVKLGDFGASKRLQTICMSGTGMR  
SVTGTPYWMSPEVISGEGYGRKADVWSLGCTVVEMLTEKPPWAEYEAMAAIFKIATQPTNPQLPSHISEHGRDFL  
RRIFVEARQRP SAEELLTHHFAQLMY

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**FIGURE 4935**

AGAAGGAGGCCCCAACCCCTGAGCACAACAGCAACCTGGCCAATATCTTAGAGGTGTGTCGCAGCAAACATATGCC  
CAAGTCAACGATTGAGACAGCACTGAAAATGGAGAAATCCAAGGACACTTATTTGCTGTATGAGGGTCGAGGCC  
TGGTGGCTCTTCTCTGCTCATCGAGGCATTATCTAACAGTAGCCACAAGTGCCAAGCAGACATTAGACATATCCT  
GAATAAGAATGGAGGAGTGATGGCTGTAGGAGCTCGTCACTCTTTTGACAAAAGGGGGTGATTGTGGTTGAAGT  
GGAGGACAGAGAGAAGAAGGCTGTGAACCTAGAGCGTGCCCTGGAGATGGCAATCGAAGCAGGAGCTGAGGATGT  
CAAGGAACTGAAGATGAAGAAGAAAGGAACGTTTTTAAATTTATTTGTGATGCCCTTCACTGCACCAAGTGAG  
GAAGAAGCTGGACTCCCTGGGCCTGTGTTCTGTGTCCTGTGCACTAGAGTTCATCCCCAACTCAAAGGTGCAGCT  
GGCTGAGCCCGACCTGGAACAGGCCGCACATCTCATTCAAGGCTCTCAGCAACCACGAGGATGTGATTCACGTCTA  
TGATAACATTGAATAACCAGGCTACATGTGCCCCGGGTTCCCTTAGAAATGTGGCAGCCCATTCCAGCACAC  
AGGCTTCTGCAGCAATCTCTGAGGGTAAAGCCGGTGGGAGGCTCAGCAGGCCAGGAGGCCAAGGACAGGACTTG  
CGACCTTGAAGCCAAAGGAATCTCACTTGTGGGGCCTCCTTGTGAGCTCTGCTGCTGTCTCAGAGCCATCTGGAT  
GAGTGTCCCGACACCCTCTCGGATGCAGGGCAGGACCACCCAGCTGGTCAGACTCTGATGTTGGGTAGCTGGCCT  
CTGTGGGGATTGTAAGTGCCCTGAGGCGCTCTGTACTAGAACTGCTCTTAATAATAACGGTGATTATTGGTTGC  
TGC

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**FIGURE 4936A**

CGGAGGAGGACGCGAGCCCTTGCGGGCGGTTCATCACAGCCAGCCTCGGGGCTGCCACAGCGCTTGCGCCTGT  
GCGCCCTCGGTCCCCGCGTCCACTGAGCGCCGCGCTCGGGGATGGGGCCCGGCCGCGCCCGCCCGCGCCCTGGC  
CTCGTCACCTGCTGCGCTGCGTCTCTCCTCGGGTGCTGACCTCGGCCGTCCCGGCGCCCTGGGGAGCCCG  
CCCTCCCGGAACCCAACTCTTCTCATCTTCAGCCATGGACTGCAGGGCTGCCTGGAGGCCAGGGCGGGCAGG  
TCAGAGTCACCCCGGCTTGCAATACCAGCCTCCCTGCCAGCGCTGGAAGTGGGTCTCCCGAAACCGGCTATTCA  
ACCTGGGTACCATGCAGTGCCTGGGCACAGGCTGGCCAGGCACCAACACCACGGCCTCCCTGGGCATGTATGAGT  
GTGACCGGGAAGCACTGAATCTTCGCTGGCATTGTCTGCTACACTGGGTGACCAGCTGTCTTGCTCCTGGGGGCC  
GCACCAGCAACATATCCAAGCCTGGCACCCCTTGAGCGTGGTGACCAGACCCGAGTGCCAGTGCGCATCTACG  
GCAGCGAGGAGGACCTATGTGCTCTGCCCTACCAGAGGTCTACACCATCCAGGGAACCTCCACGGAAGCCGT  
GCACCATCCCTTCAAATATGACAACCACTGGTTCCACGGCTGCACCAGCACGGGCCGCGAGGATGGTACCTGT  
GGTGTGCCACCCAGGACTACGGCAAAGACGAGCGCTGGGGCTTCTGCCCATCAAGAGTAACGACTGCGAGA  
CCTTCTGGGACAAGGACCAGCTGACTGACAGCTGTACAGTTTAACTTCCAGTCCACGCTGTCTGAGGAGGAGG  
CCTGGGCCAGCTGCGAGCAGCAGGGTGCGGATCTGCTGAGCATCACGGAGATCCACGAGCAGACCTACATCAACG  
GCCTCCTCACTGGGTACAGCTCCACCCTGTGGATCGGCTTGAATGACTTGGACACGAGCGGAGGCTGGCAGTGGT  
CGGACAACCTCGCCCTCAAGTACCTCAACTGGGAGAGTGACCAGCCGACAACCCAGTGAGGAGAAGTGTGGAG  
TGATCCGCACTGAGTCTCGGGCGGCTGGCAGAACCGTGACTGCAGCATCGCGTGCCTATGTGTGAAGAAGA  
AGCCCAACGCCACGGCCGAGCCACCCCTCCAGACAGGTGGGCCAATGTGAAGGTGGAGTGCGAGCCGAGCTGGC  
AGCCCTTCCAGGGCCACTGCTACCGCCTGCAGGCCGAGAAGCGCAGCTGGCAGGAGTCCAAGAAGGCATGTCTAC  
GGGGCGGTGGCGACCTGGTCAGCATCCACAGCATGGCGAGCTGGAATTCATACCAAGCAGATCAAGCAAGAGG  
TGGAGGAGCTGTGGATCGGCTCAACGATTTGAACTGCAGATGAATTTTGTAGTGGTCTGACGGGAGCCTTGTGA  
GCTTACCCACTGGCACCCCTTTGAGCCCAACAACCTCCGGGACAGTCTGGAGGACTGTGTACCATCTGGGGCC  
CGGAAGGCCGCTGGAACGACAGTCCCTGTAACAGTCTTTGCCATCCATCTGCAAGAAGGCAGGCCAGCTGAGCC  
AGGGGGCCCGCAGGAGGACCATGGCTGCCGGAAGGGTTGGACGTGGCACAGCCCATCCTGCTACTGGCTGGGAG  
AAGACCAAGTGACCTACAGTGAGGCCCGGCGCTGTGCACTGACCATGGCTCTCAGCTGGTACCATCAACA  
GGTTCGAGCAGGCCTTCGTCAGCAGCCTCATCTACAACCTGGGAGGGCGAGTACTTCTGGACGGCCCTGCAGGACC  
TCAACAGCACCAGCTCCTTCTTCTGGCTCAGTGGGGATGAAGTCACTGTACACCCACTGGAACCGGGACAGCCCG  
GGTACAGCCGTGGGGGCTGCGTGGCGCTGGCCACTGGCAGCGCCATGGGGCTGTGGGAGGTGAAGAACTGTACCT  
CGTTCCGGGCCCCGTACATCTGCCGGCAGAGCCTGGGCACTCCAGTGACCGCGAGCTGCCGGGGCCAGATCCCA  
CGCCAGCCTCACTGGCTCCTGTCCCCAGGGCTGGGCCTCGGACACCAAACTCCGGTATTGCTATAAGGTGTTCA  
GCTCAGAGCGGCTGCAGGACAAGAAGAGCTGGGTCCAGGCCAGGGGGCTGCCAGGAGCTGGGGGCCAGCTGC  
TGAGCCTGGCCAGCTACGAGGAGGAGCACTTTGTGGCAACATGCTCAACAAGATCTTCGGTGAATCAGAACCCG  
AGATCCACGAGCAGCACTGGTCTTGATCGGCCTGAACCGTCGGGATCCAGAGGGGGTCAAGTGTGGCGCTGGA  
GCGACGGCGTAGGGTTCTTTACCAAAATTCGACCGGAGCCGGCAGCAGCAGCAGCATCCGAGGCTGTGCGG  
TGCTGGACCTGGCCTCCCTGCAGTGGGTGGCCATGCAGTGGACACACAGCTGGACTGGATCTGCAAGATCCCCA  
GAGGTACGGACGTGCGGGAGCCCGACGACAGCCCTCAAGGCCGACGGGAATGGCTGCGCTTCCAGGAGGCCGAGT  
ACAAGTTCTTTGAGCACCCTCCACGTGGGCGCAGGCGCAGCGCATCTGCACGTGGTTCCAGGCCGAGCTGACCT  
CCGTGCACAGCCAGGCAGAGCTAGACTTCTGAGCCACAACCTGCAGAAGTTCTCCCGGGCCAGGAGCAGCACT  
GGTGGATCGGCCTGCACACCTCTGAGAGCGATGGGCGCTTCAGATGGACAGATGGTTCCATTATAAACTTCATCT  
CCTGGGCACCAGGCAACCTCGGCCTGTGCGCAAGGACAAGAAGTGGTGTACATGACAGCCAGCCGAGAGGACT  
GGGGGGACAGAGGTGCTGACAGCCTTGCCCTACATCTGCAAGCGCAGCAACGTCACCAAGAAACGACGCCCC  
CAGACCTGCCAACTACAGCCCTGGGGGGCTGCCCCCTGCTACTGGATCCAGTTCTCAACAAGTGTTCAGGTCC  
AGGGCCAGGAACCCAGAGCCGGGTGAAGTGGTCAAGGACAGTCTCTCTGTGAACAGCAAGAGGCCAGCTGG  
TCACCATCACAAACCCCTTAGAGCAAGCATTATCACAGCCAGCCTGCCCAATGTGACCTTTGACCTTTGGATTG  
GCCTCCATGCCTGCGAGAGGACTTCCAGTGGGTGGAGCAGGAGCCTTTGATGTATGCCAACTGGGCACCTGGGG  
AGCCCTCTGGCCCTAGCCCTGCTCCAGTGGCAACAAACCGACAGCTGTGCGGTGGTCTGCACAGCCCTCAG  
CCCACTTCACTGGCCGCTGGGACGATCGGAGCTGCACGAGGAGACCCATGGCTTCATCTGCCAGAAGGGCACGG  
ACCCCTCCCTGAGCCGCTCCCGAGCAGCGCTGCCCCCGCCCCGGGCACTGAGCTCTCCTACCTCAACGGCACCT  
TCCGGCTGCTTCAGAAGCCGCTGCGTGGCAGATGCCCTCCTGCTGTGTGAGAGCCACAATGCCAGCCTGGCCT

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**FIGURE 4936B**

ACGTGCCCCGACCCCTACACCCAGGCCTTCCTCACGCAGGCTGCCCCAGGGGCTGCGCACGCCGCTCTGGATTGGGC  
TGGCTGGCGAGGAGGGCTCTCGGCGGTACTCCTGGGTCTCAGAGGAGCCGCTGAACTACGTGGGCTGGCAGGACG  
GGGAGCCGCAGCAGCCGGGGGGCTGTACCTACGTAGATGTGGACGGGGCTGGCGCACCACCAGCTGTGACACCA  
AGCTGCAGGGGGCTGTGTGTGGGGTTAGCAGTGGGCCCCCTCCTCCCCGAAGAATAAGCTACCATGGCAGCTGTC  
CCAGGGACTGGCAGACTCCGCGTGGATTCCCTTCCGGGAGCACTGCTATTCTTTCCACATGGAGCTGCTGCTGG  
GCCACAAGGAGGCGCGACAGCGCTGCCAGAGAGCGGGTGGGGCCGCTCCTGTCTATCCTGGATGAGATGGAGAATG  
TGTTTGCTGTGGGAGCACCTGCAGAGCTATGAGGGCCAGAGTCGGGGCGCCTGGCTGGGCATGAACTTCAACCCCA  
AAGGAGGCACTCTGGTCTGGCAGGACAACACAGCTGTGAACTACTCCAAGTGGGGGCCCCGGGCTTGGGCCCCA  
GCACTGTGAGCCACAACAGCTGCTACTGGATTGAGAGCAACAGCGGGCTATGGCGCCCCGGCGCTTGACCAACA  
TCACCATGGGTGTCGTCTGCAAGCTTCCTCGTGTGAGCAGAGCAGCTTCTCCCCATCAGCGCTTCCAGAGAACC  
CAGCGGCCCTGGTGGTGGTGTGATGGCGGTGCTGCTCCTGGCCTTGCTGACCGCAGCCCTCATCCTTTACC  
GGAGGCGCCAGAGCATCGAGCGCGGGGCTTTGAGGGTGCCCGCTACAGCCGCAGCAGCTCCAGCCCCACCGAGG  
CCACTGAGAAGAACATCCTGGTGTGAGACATGGAAATGAATGAGCAACAAGAATAGAGCCAGGCGCGTGGGCAGG  
GCCAGGGCGGGAGGAGCTGGGGAGCTGGGGCCCTGGGTGAGTCTGGCCCCCACCAGCTGCCTGTCCAGTTGGCC  
TATGGAAGGGTGCCCTTGGGAGTCGCTGTTGGGAGCCGGAGCTGGGCAGAGCCTGGGCTGGTGGGGTGCCACCTT  
CCCACAAGGGCTGGGCTGAGACCCAGCTGAGTGCAGCGTGGCGTTTCCCTTTCTGGGGGGGCTGAGGTCTTGTC  
ACCTGGTCTGTGCCCCCACAGGAACAGAGGTAGGATGGGAGGGGGAACGAGAGCCTCTTTCTCCCCAGAGCCC  
CCGGCCAGGCCTGTTGATCCGCGCCCCAGGACCCCTTCTTTGAGAGCCCGAGGAGCCTCCCCTGTCCCCTCG  
GGCAGATCTGTTGTGTCTCTTCCCACCTGGCAGCCTCAGCTCTGTGCCCTCACCTGCTCCCTCTCGCCCTT  
TCTCTCCCACCCCTTCTTCTGAGCCGGGCCCTGGGGATTGGGGAGCCCTCTTGTTCCTGATGAGGGTCAGCTGA  
GGGGGCTGAGCATCCATCACTCCTGTGCCTGCTGGGGTGGCTGTGGGGCGTGGCAGGAGGGGCTAGGTGGGTTG  
GGCCTGAGAACCAGGGCACGGGTGTGGTGTCTGCTGGGCTGGAGATAAGACTGGGGAGAGACACCCCAACCTCCC  
AGGGTGGGAGCTGGGCCGGGCTGGGATGTCTCTCTGCGGGCGGGGAGGGCTCTGCCCCCTGGAAGAGTCCCC  
TGTGGGGACCAAAATAAGTTCCCTAACATCTCCAGCTCCTGGCTCTGGTTTGGAGCAAGGGGAAGGGTTGCCAGA  
GTCCTGGGGGCCCCAGAGGAGCAGGAGTCTGGGAGGGGCCAGAGTTCACCCTCTAGTGGATCCAGGAGGAGCAGC  
ACCCGAGCCCTGGAGTGGCCAGTACCCTTCCAAGAGGCCACAGTCCCAGCCAGGACAAAGTATGCGGCCCATCC  
TGGTGGCAGACGCTGGGACAATGTGAACATGGACTCGAAGACATGCCCTTTCTCTGTAGTTGATTTTTTAAATG  
TGCCATTATTGTTTTT

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## FIGURE 4937

MGPGRPAPAPWPRHLLRCVLLLGCLHLGRPGAPGDAALPEPNVFLIFSHGLQGCLQAQGGQVRVTPACNTSLPAQ  
RWKWVSRNRLFNLTGMQCLGTGWPGTNTTASLGMIECDREALNLRWHCRTLGDLQSLLLGARTSNISKPGTLERG  
DQTRSGQWRIYGSEEDLCALPYHEVYTIQGNSHGKPCITIPFKYDNQWFHGCTSTGREDGHLWCATTQDYGKDERW  
GFCPIKSNDCEFTWDDQDLTDSCYQFNQSTLSWREAWASCEQQGADLLSITEIHEQTYINGLLTGYSSTLWIGL  
NDLDTSGGWQSDNSPLKYNWESDQPDNPSEENCGVIRTESSGGWQNRDCSIALPYVCKKKPNATAEPTPPDRW  
ANVKVECEPSWQPFQGHYRLQAEKRSWQESKKACLRGGGDLVSIHSMAELEFITKQIKQEVEELWIGLNDLKLO  
MNFESDGSLSVFTWHHPFEPNNFRDSLEDCVTIWGPEGRWNSPCNQSLPSICKKAGQLSQGAEEEDHGCRKGW  
TWHSPSCYWLGEDQVTYSEARRLCTDHGSQLVITITNRFEQAFVSSLIYNWEGEYFWTALQDLNSTGSFFWLSGDE  
VMYTHWNRDQPGYSRGGCVALATGSAMGLEWVKNTSFRARYICRQSLGTPVTPPELPGPDPTPSLTGSCPGWAS  
DTKLRYCYKVFSSERLQDKKSWVQAQACQELGAQLLSLAYEEEEHFVANMLNKIFGESEPEIHEQHWFWIGLNR  
RDPRGGQSWRWSGVGFSYHNFRDRRHDDDIRGCAVLDSLQWVAMQCDTQLDWICKIPRGTDVREPDDSPQG  
RREWLRFQEAQYKFFHHSTWAQAQRICWFAELTSVHSQAELDFLSHNLQKFSRAQEQHWWIGLHTSESDGRF  
RWTGSIINFISWAPGKPRPVGDKKKCVYMTASREDWGDQRCLTALPYICKRSNVTKETQPPDLPTTALGGCPSD  
WQFLNLCFQVQGEQPSRVKWEAQFSCEQQAQLVTITNPLEQAFITASLPNVTFDLWIGLHASQRDFQWVEQ  
EPLMYANWAPGEPSPGSPAPSGNKPTSCAVVLHSPSAHFTGRWDDRSCTEETHGFCQKGTDPSPSPSPALPPA  
PGTELSYLNCTFRLLQKPLRWHDALLLCESHNASLAYVDPYTAFLTQAARGLRTPPLWIGLAGEEGSRYSWVS  
EEPLNYVGWQDGEPPQPGGCTYVDVDGAWRTTSCDTKLQGAVCGVSSGPPPPRRISYHGSCPQGLADSAWIPFRE  
HCYSFHMELLGHKEARQRCQRAGGAVLSILDEMENVFVWEHLQSYEGQSRGAWLGMNFNPKGGTLVWQDNTAVN  
YSNWGPPGLGPSMLSHNSCYWIQSNGLWRPGACTNITMGVVCKLPRAEQSSFSPSALPENPAALVVVLMAVLLL  
LALLTAALILYRRRQSIERGAFEGARYSRSSSSPTEATEKNILVSDMEMNEQQE

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**FIGURE 4938**

GGAGCCGCGCCGCATCTCAGGCGCAGTCTCTAGGGGCTGTGCGCATCCGTGGGGGGGACATGCGCATCTCAGGGG  
GGCTGCTCGCATCTGGGGGTGCTGTGTGCACTCTCGGGGGGGCTGTGCCCATCTAGCGGGGTGGCTGTGCGCATCT  
GGAGGGGGCTGTGCGCAACCCGGGGGGGGTGTGCGCGCATCTAGCAGGGGCGGCTGTGCGCATTTGCGGGGGG  
CTGTGCATATCTGGGGGGACCGTGCTTATCTCCGGGGGGCGGCTGTGCGCATCTGAGGGGTGTGTACATCTCGGG  
GGGCCTGTGCGCATCTTGGGGGGCTGTGTGCACTCCGCGGGGGCTGTGCGCATCTCGGGGTGTGTGCGCTGCTCC  
TCTGAGCTGTGCTCTTTCTTGACGCTTTGCCTCAGCATGGAGGGCGGGGCCGCGGAGCCACCCCCACAGCACT  
GCCTTACTACGTGGCCTTCTCCCAGCTGCTGGGCCTGACCTTGGTGGCCATGACCGGCGCGTGGCTCGGGCTGTA  
CCGAGGCGGCATTGCCTGGGAGAGCGACCTGCAGTTCAACGCGCACCCCCCTCTGCATGGTCATAGGCCTGATCTT  
CCTGCAGGGAAATGCCCTGCTGGTTTACCCTGTCTTCAGGAACGAAGCTAAACGCACCACCAAGGTCCTGCACGG  
GCTGCTGCACATCTTTGCGCTCGTCATCGCCCTGGTTGGCTTGGTGGCGGTGTTGCGACTACCACAGGAAGAAGGG  
CTACGCTGACCTGTACAGCCTACACAGCTGGTGGGGATCCTTGTCTTTGTCTGTACTTTGTGCACTGGCTGGT  
GGGCTTACGCTTCTTCTGTTCCCGGAGCTTCAATTCTCCCTGCGGAGCCGCTACCGCCACAGCACATCTTCTT  
TGGTGTCTACCATCTTCTCTCTTCCGTGGGCACCGCCCTGCTGGGCCTGAAGGAGGCACTGCTGTCAACCTCGG  
GGGCAAGTATAGCGCATTTGAGCCCCGAGGTGTCTTGGCCAACGTGCTGGGCCTGCTGCTGGCCTGCTTCGGTGG  
GGCGGTGCTCTACATCTTGACCCGGGCGGACTGGAAGCGGCCTTCCCAGGCGGAAGAGCAGGCCCTCTCCATGGA  
CTTCAAGACGCTGACGGAGGGAGATAGCCCCGGCTCCAGTGTATGCGCCCGCGCCGCTTGGGGGTTCGCGGGGT  
GTCTTCTTGCTGCCCCCTGCTGAGGCGTCTTCAGGACTGCAGGCTCCGGAGAGTGGCTCTGGCAGCAGCGGGCG  
CGTGGGTGCGCTGCATCTGTTTGAGTGTCTTCTGGGGTCAGGTCTCCGCCTCCTCTGCTTCTCTCTTCTCC  
GCTGCTATAGACCAGTTTATTGTGTGTGGCTCCCGTGTCTCTGTGCCCCCTTCAGTGCAGAAGGCTTTGGGTAG  
GACTTCGGGTGTTTCGGTCTGGTTCGAGAGCACAGATCTTTAAAGAAGCGAGAGAGGAGGCCCCACCTCTGGC  
AGCAGATGCCCTGGGGCAAGGCCAGGGGAACTGGGGGGCCTCAGGGACAGGCCTGGAAGGCCACGATGGCTGC  
TGAATTCAAACAAGGAGTCCCTCCAGCCTGAATAACACGTGGCACAAATGGGCCCGGCCTTTGGCAGAGGAGCAA  
GTGATATGATGTGTAAAGTATGTTGGTGGTGAAGCAAGGTTCCCCAGGAGAGGGGAGGGACTGGCCCCCTGGGAA  
GCTCTGAGATGAGGCTGTGGCCAGCTGTAGTCTGACCTTCTCTTTAACCTTTAGCCCTAGGATGGCTT  
TGGTGGGAGAGGGGATAGAAGCCCATGACTTCAGACAGACTTTCTCTTGGCAGATGCAGGCGGGCCTCCTCCCAG  
GCTGCTCCAGACATGGGGGTGGGGATGGGGGGACCTTGACGCCCTTCTGCTGGGGCTCCCTCCTTGTAGCA  
CCCCCTTGGCGCTCAGCTCTGTTTCTCTCCAGGCTCACCAGGCTCTGCTCAGGCTGGGAGGCAGAGGGCA  
CAAACCTTATAATTTTTTAAATGAAAAACCGTGTCTGCTGGCTGTGGCTAGAGCCCCCTGGGGCTGCTGGAGCTG  
CTGCCTCTGTCTGGAGGACGAGCCTTCTCCTTATCTGCTGCCCATCTTTCCAGGAAGTCAGGATGGAGTCAGAA  
CAACTACAGTCATCCCCCGTGGTGTCTGCACATCACTCCAGCCCCATAAAGAGTGTGATGTTAGCTGAGTCACCA  
TTTGGCTTGGCCTGGAAATAGTGTGATTAGAACTGATCGTGTGCGAGGCCAGGAGATCAAGACCATCTTGAC  
TAACAAACACAGTGAAACCCGCTCTCTACTAAAAATACAAAAAATTAGCCAGGCGTGGTGGTGGGCGCCTGTAG  
TCCAGCTACTTGGGAG



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**FIGURE 4939**

AGTATGTGTGGTTGGGGAATTCATGTGGAGGTCAGAGTGGAAGCAGGTGTGAGAGGGTCCAGCAGAAGGAAACAT  
GGCTGCCAAAGTGTTTGAGTCCATTGGCAAGTTTGGCCTGGCCTTAGCTGTTGCAGGAGGCGTGGTGAACCTGTC  
CTTATATAATGTGGATGCTGGGCACAGAGCTGTCATCTTTGACCGATTCCGTGGAGTGACAGGACATTGTGGTAGG  
GGAAGGGACTCATTTTCTCATCCCGTGGGTACAGAAACCAATTATCTTTGACTGCCGTTCTCGACCACGTAATGT  
GCCAGTCATCACTGGTAGCAAAGATTTACAGAATGTCAACATCACACTGCGCATCCTCTTCCGGCCTGTCGCCAG  
CCAGCTTCCTCGCATCTTCACCAGCATCGGAGAGGACTATGATGAGCGTGTGCTGCCGTCCATCACAACTGAGAT  
CCTCAAGTCAGTGGTGGCTCGCTTTGATGCTGGAGAATAATCACCAGAGAGAGCTGGTCTCCAGGCAGGTGAG  
CGACGACCTTACAGAGCGAGCCGCCACCTTTGGGCTCATCCTGGATGACGTGTCCTTGACACATCTGACCTTCGG  
GAAGGAGTTCACAGAAGCGGTGGAAGCCAAACAGGTGGCTCAGCAGGAAGCAGAGAGGGCCAGATTTGTGGTGGA  
AAAGGCTGAGCAACAGAAAAGGCGGCCATCATCTCTGCTGAGGGCGACTCCAAGGCAGCTGAGCTGATTGCCAA  
CTCACTGGCCACTGCAGGGGATGGCCTGATCGAGCTGCGCAAGCTGGAAGCTGCAGAGGACATCGCGTACCAGCT  
CTCAGCTCTCGGAACATCACCTACCTGCCAGCGGGGCAGTCCGTGCTCCTCCAGCTGCCCCAGTGAGGGGCCAC  
CCTGCCTGCACCTCCGCGGGCTGACTGGGCCACAGCCCCGATGATTCTTAACACAGCCTTCCTTCTGCTCCACCC  
CCAGAAATCACTGTGAAATTTTCATGATTGGCTTAAAGTGAAGGAAATAAAGGTAAATCACTTCAGATCTCTAAT  
TAGTCTATCAAATGAACTCTTTCATTCTTCTCACATCCATCTACTTTTTTATCCACCTCCCTACCAAAAATTGC  
CAAGTGCCTATGCAAACCAGCTTTAGGTCCCAATTTCGGGGCCTGCTGGAGTTCGGGCCTGGGCACCAGCATTTGG  
CAGCACGCAGGCGGGGCAGTATGTGATGGACTGGGGAGCACAGGTGTCTGCCTAGATCCACGTGTGGCCTCCGTC  
CTGTCACTGATGGAAGGTTTGCGGATGAGGGCATGTGCGGCTGAAGTGAAGGCAGGCCTCCGTCTTCCCAGCG  
GTTCTGTGCAGATGCTGCTGAAGAGAGGTGCCGGGGAGGGGCAGAGAGGAAGTGGTCTGTCTGTTACCATAAGT  
CTGATTCTCTTAACTGTGTGACCAGCGGAAACAGGTGTGTGTGAAGTGGGCACAGATTGAAGAATCTGCCCCTG  
TTGAGGTGGGTGGGCCTGACTGTGCCCCCAGGGTCTTAAACTTGGATGGACTTGTATAGTGAGAGAGGAGGC  
CTGGACCGAGATGTGAGTCTGTGAAGACTTCCTCTCTACCCCCACCTTGGTCCCTCTCAGATACCCAGTGGA  
ATTCCAACCTGAAGGATTGCATCCTGCTGGGGCTGAACATGCCTGCCAAAGACGTGTCCGACCTACGTTCTGGC  
CCCCCTCGTTCAGAGACTGCCCTTCTCACGGGCTCTATGCCTGCACTGGGAAGGAAACAAATGTGTATAAACTGCT  
GTCAATAAATGACACCCAGACCTTCC

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**FIGURE 4940**

MAAKVFESIGKFGLALAVAGGVVNSALYNVDAGHRAVIFDRFRGVQDIVVGEGTHFLIPWVQKPIIFDCRSRPRN  
VPVITGSKDLQNVNITLRILFRPVASQLPRIFTSIGEDYDERVLPSITTEILKSVMVARFDAGELITQRELVSQV  
SDDLTERAATFGLILDDVSLTHLTFGKEFTEAVEAKQVAQQEAERARFVVEKAEQQKAAIISAEGDSKAAELIA  
NSLATAGDGLIELRKLEAAEDIAYQLSRSRNITYLPAGQSVLLQLPQ

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**FIGURE 4941**

AGATCGATCTAAGATGGCGACCGTCGAACCGGAAACCACCCCTACTCCTAATCCCCGACTACAGAAAAGGAGAA  
AACGGAATCTAATCAGGAGGTTGCTAACCCAGAACACTATATTAAACATCCCCTACAGAACAGATGGGCACTCTG  
GTTTTTTAAAAATGATAAAAGCAAACTTGGCAAGCAAACCTTGTGGCTGATCTCCAAGTTTGATACTGTTGAAGA  
CTTTTGGGCTCTGTACAACCATATCCAGTTGTCTAGTAATTTAATGCCTGGCTGTGACTACTCACTTTTTTAAGGA  
TGGTATTGAGCCTATGTGGGAAGATGAGAAAAACAAACGGGGAGGACGATGGCTAATTACATTGAACAAACAGCA  
GAGACGAAGTGACCTCGATCGCTTTTGGCTAGAGACACTTCTGTGCCTTATTGGAGAATCTTTGATGACTACAG  
TGATGATGTATGTGGCGCTGTTGTTAATGTTAGAGCTAAAGGTGATAAGATAGCAATATGGACTACTGAATGTGA  
AAACAGAGAAGCTGTTACACATATAGGGAGGGTATACAAGGAAAGGTTAGGACTTCCTCCAAAGATAGTGATTGG  
TTATCAGTCCACGCAGACACAGCTACTAAGAGCGGCTCCACCCTAAAAATAGGTTTGTGTTTAAGAAGACAC  
CTTCTGAGTATTCTCATAGGAGACTGCGTCAAGCAATCGAGATTTGGGAGCTGAACCAAAGCCTCTTCAAAAAGC  
AGAGTGGACTGCATTTAAATTTGATTTCCATCTAAATGTTACTCAGATATAAGAGAAGTCTCATTGCGCTTTGTC  
TTGTACTTCTGTGTTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGCTAGAGTTTACACTATCCCAATCAAAGAA  
TTACAGTACACATCTCCAGAATCCATAAATGTGTTTCTGGCCCACTCTGTAATAGTTCAGTAGAATTACCATTAA  
TTACATACAGATTTTACCTATCCACAATAGTCAGAAAACAACCTGGCATTCTATACTTTACAGGAAAAAAAATT  
CTGTTGTTCCATTTTATGCAGAAGCATATTTTGCTGGTTTGAAAGATTATGATGCATACAGTTTCTAGCAATTT  
TCTTTGTTTCTTTTTACAGCATTGTCTTTGCTGTACTCTTGCTGATGGCTGCTAGATTTTAATTTATTTGTTTCC  
CTACTTGATAATATTAGTGATTCTGATTTTCAGTTTTTCATTTGTTTTGCTTTTGTTTTTTCTCATGTAACATT  
GGTGAAGGATCCAGGAATATGACACAAAGGTGAATAAACATTAATTTTGTGCATTCTTTGGTAATTTTTTTTGT  
TTTTTGTAACIACAAAGCTTTGCTACAAATTTATGCATTTTCATTCAAATCAGTGATCTATGTTGTGTGATTTC  
TAAACATAATTGTGGATTATAAAAAATGTAACATCATAATTACATTCCTAACTAGAATTAGTATGTCTGTTTTTG  
TATCTTTATGCTGTATTTTAACTTTGTATTACTTAGGTTATTTTGCTTTGGTTAAAAATGGCTCAAGTAGAAA  
AGCAGTCCCATTCATATTTAAACAGTGTAACAACTGTAAATAAAATGTGTACAGTGAATTGTCTTT

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**FIGURE 4942**

AGATCGATCTAAGATGGCGACCGTCGAACAGATGGGCACTCTGGTTTTTTAAAAATGATAAAAGCAAACTTGGC  
AAGCAAAC TTGTGGCTGATCTCCAAGTTTGATACTGTTGAAGACTTTTGGGCTCTGTACAACCATATCCAGTTGT  
CTAGTAATTTAATGCCTGGCTGTGACTACTCACTTTTTAAGGATGGTATTGAGCCTATGTGGGAAGATGAGAAAA  
ACAAACGGGGAGGACGATGGCTAATTACATTGAACAAACAGCAGAGACGAAGTGACCTCGATCGCTTTTGGCTAG  
AGACACTTCTGTGCCTTATTGGAGAATCTTTTGATGACTACAGTGATGATGTATGTGGCGCTGTTGTTAATGTTA  
GAGCTAAAGGTGATAAGATAGCAATATGGACTACTGAATGTGAAAACAGAGAAGCTGTTACACATATAGGGAGGG  
TATACAAGGAAAGGTTAGGACTTCCTCCAAAGATAGTGATTGGTTATCAGTCCCACGCAGACACAGCTACTAAGA  
GCGGCTCCACCACTAAAAATAGGTTTGTGTTTAAGAAGACACCTTCTGAGTATTCTCATAGGAGACTGCGTCAA  
GCAATCGAGATTTGGGAGCTGAACCAAGCCTCTTCAAAAAGCAGAGTGGACTGCATTTAAATTTGATTTCCATC  
TAAATGTTACTCAGATATAAGAGAAG

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**FIGURE 4943A**

GCCGAGCACC GCGCACC GCGTCATGGGGGCCGCTCGGGGCCGCGGGGGCGGGGCTGCTGCTGCCGCTGCCGCT  
GCTGTTGCTGCTXGCCGCCGAGCCCGCCCTGGCGTTGXGXACCCCGGGCTGCAGCCCXGAACTTTTCTXGCTG  
ACGAGGCCGGGGCGCAGCTCTTCGCGCAGAGCTACAACCTCCAGCGCCGAACAGGTGCTGTTCCXAGAGCGTGGCC  
GCCAGCTGGGCGCAGCACCAACATCACCGCGGAGAATGXXXXXXXGAGGAAGCAGCCCTGCTCAGCCAG  
GAGTTXTGCGXGGAGGCCTXGGGGCAGXAAGGCCAAXGGAGCTGTATGAACCGATCTGGCAGAACTTCACGGXACC  
XCGCAXGCTGCGCAGGATCATCGGAGCTGTGCGCACCTGGGCTCTGCCAACXCTGCCCTGGCTAAGCGGCAGC  
AGTACAACGCCCTGCTAAGCAACATGAGCAGGATCTACTCCACCGCCAAGGTCTGCCCTCCCCAACAAGACTGCCA  
CCTGCTGGTCCCTGGACCCAGATCTCACCACATCCTGGCTTCTCTCGGAACCTACGXCCATGCTCCTGTTTGCT  
GGGAGGGCTGGCACAATGCTGCGGGCATCCCGCTGAAACCGCTGTACGAGGATTTCACTGCCCTCAGCAATGAAG  
CCTACAAGCAGGACGGCTTCACAGACACGGGGGCCCTACTGGCGCTCCTGGTACAACCCCCACCTTCGAGGACG  
ATCTGGAACACCTCTACCAACAGCTAGAGCCCTCTACCTGAACCTCCATGCCTTCGTCCGCCGCGCACTGCATC  
GCCGATACGGAGACAGATACATCAACCTCAGGGGACCCATCCCTGCTCATCTGCTGGGAGACATGTGGGCCCAGA  
GCTGGGAAAACATCTACGACATGGTGGTGCCTTTCCAGACAAGCCCAACCTCGATGTCAACAGTACTATGCTGC  
AGCAGGGCTGGAACGCCACGCACATGTTCCGGGTGGCAGAGGAGTTCTTCACCTCCCTGGAGCTCTCCCCATGC  
CTCCCGAGTTCTGGAAGGGTCGATGCTGGAGAAGCCGGCCGACGGGCGGGAAGTGGTGTGCCACGCCTCGGCTT  
GGGACTTCTACAACAGGAAAGACTTCAGGATCAAGCAGTGCACACGGGTACGATGGACCAGCTCTCCACAGTGC  
ACCATGAGATGGGCCATATACAGTACTACCTGCAGTACAAGGATCTGCCCGTCTCCCTGCGTCTGGGGGGCCAAAC  
CCGGCTTCCATGAGGCCATTGGGGACGTGCTGGCGCTCTCGGTCTCCACTCCTGAACATCTGCACAAAAATCGGCC  
TGCTGGACCGTGTACCAATGACACGGAAGTGACATCAATTACTTGCTAAAAATGGCACTGGAAAAAATGCTT  
TCTGCCCCTTTGGCTACTTGGTGGACCAAGTGGCGCTGGGGGCTTTAGTGGGCGTACCCCCCTTCCCGCTACA  
ACTTCGACTGGTGGTATCTTCGAACCAAGTATCAGGGGATCTGTCTCCTGTTACCCGAAACGAAACCCACTTTG  
ATGCTGGAGCTAAGTTTCATGTTCAAATGTGACACCATACATCAGGTACTTTGTGAGTTTGTCTGCAGTTCC  
AGTTCCATGAAGCCCTGTGCAAGGAGGCAGGCTATGAGGGCCCACTGCACCAGTGTGACATCTACCGGTCCACCA  
AGGCAGGGGCCAAGCTCCGGAAGGTGCTGCAGGTGGCTCCTCCAGGCCCTGGCAGGAGGTGCTGAAGGACATGG  
TCGGCTTAGATGCCCTGGATGCCAGCCGCTGCTCAAGTACTTCAGCCAGTCACCCAGTGGCTGCAGGAGCAGA  
ACCAGCAGAACGGCGAGGTCTGGGCTGGCCCGAGTACCAGTGGCACCCGCGGTTGCCTGACAACCTACCCGGAGG  
GCATAGACCTGGTGACTGATGAGGCTGAGGCCAGCAAGTTTGTGGAGGAATATGACCGGACATCCAGGTGGTGT  
GGAACGAGTATGCCGAGGCCAACTGGAAC TACAACCAACATCACCACAGAGACCAGCAAGATTCTGCTGCAGA  
AGAACATGCAAAATAGCCAACCACACCCTGAAGTACGGCACCCAGGCCAGGAAGTTTGATGTGAACAGTTGCAGA  
ACACCACTATCAAGCGGATCATAAAGAAGGTTACAGACCTAGAACGGGCAGCACTGCCTGCCAGGAGCTGGAGG  
AGTACAACAAGATCCTGTTGGATATGGAACCACTACAGCGTGGCCACTGTGTGCCACCCGAATGGCAGCTGCC  
TGCAGCTCGAGCCAGATCTGACGAATGTGATGGCCACGTCCCGGAAATATGAAGACCTGTTATGGGCATGGGAGG  
GCTGGCGAGACAAGGCGGGGAGAGCCATCCTCCAGTTTTACCCGAAATACGTGGAACCTCATCAACCAGGCTGCCC  
GGCTCAATGGCTATGTAGATGCAGGGGACTCGTGGAGGTCTATGTACGAGACACCATCCCTGGAGCAAGACCTGG  
AGCGGCTCTTCCAGGAGCTGCAGCCACTCTACCTCAACCTGCATGCCCTACGTGCGCCGGGGCCCTGCACCGTCACT  
ACGGGGCCCAAGCACATCAACCTGGAGGGGGCCATTCTGCTCACCTGCTGGGGAACATGTGGGCGCAGACCTGGT  
CCAACATCTATGACTTGGTGGTGCCCTTCCCTTCAGCCCCCTCGATGGACACCACAGAGGCTATGCTAAAGCAGG  
GCTGGACGCXCCAGGAGGATGTTAAGGAGGCTGATGATTTCTTCACCTXCCCTGGGGCTGCTGCCCGTGCCTCC  
TGAGTTCTGGAACAAGTCGATGCTGGAGAAGCCAACCGACGGGCGGGAGGTGGTCTGCCACGCCTCGGCCTGGGA  
CTTCTACAACGGCAAGGACTTCCGGATCAAGCAGTGCACCACCGTGAACCTTGGAGGACCTGGTAGTGGCCACCA  
CGAAATGGGCCACATCCAGTATTTTCATGCAGTACAAAGACTTACCTGTGGCCTTGGAGGAGGGTGCCAAACCCCGG  
CTTCCATGAGGCCATTGGGGACGTGCTAGCCCTCTCAGTGTCTACGCCCAAGCACCTGCACAGTCTCAACCTGCT  
GAGCAGTGAGGGTGGCAGCGACGAGCATGACATCAACTTTCTGATGAAGATGGCCCTTGACAAGATCGCCTTTAT  
CCCCTTCACTACCTCGTGCATCAGTGGCGCTGGAGGGTATTTGATGGAAGCATCACCAGGAGAACTATAACCA  
GGAGTGGTGGAGCCTCAGGCTGAAGTACCAGGGCCTCTGCCCCCAGTGGCCAGGACTCAAGGTGACTTTGACCC  
AGGGGCCAAGTTCCACATTCTTCTAGCGTGCCTTACATCAGGTACTTTGTGAGCTTCATCATCAGTTCCAGTT  
CCACGAGGCACTGTGCCAGGCAGCTGGCCACACGGGGCCCCCTGCACAAGTGTGACATCTACCAGTCCAAGGAGGC  
CGGGCAGCGCCTGGCGACGCCATGAAGCTGGGCTTCAGXTAGGCCGTGGCCGGAXAGCCATGCAGCTGATCACG

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**FIGURE 4943B**

XXGGCCAGCCCXAACATGAGCGCCTCGGCCATGTTGAGCTACTTCAAGCCGCTGCTGGAXCTGGCTCCGCACGGA  
GAACGAGCTGCATGGGGAGAAGCTGGGCTGGCCGCAGTACAACCTGGACGXCCGAACTCCGCTCGCTCAGAAGGGC  
CCCTCCCAGACAGCGGCCGCGTCAGCTTXXCCTGGGCCTGGACCTGGATGCGCAGGAGGCCCGCGTGGGCXCAGXT  
GGCTGCTGCTCTTCTGGGCATCGCCCTGXCTGGTAGCCACCCTGGGCCTCAGCCAGCGGCTXCTTXXCAGCATCC  
GCCACCGCAGCCTCCACCGGCACTCCACGGGCCCCAGTTCGGCTCCGAGGTGGAGCTGAGACACTCCTGAGGTG  
ACCCGGCTGGGTCGGCCCTGCCCAAGGGCCTCCACCCAGAGACTGGGATGGGAACACTGGTGGGCAGCTGAGG

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**FIGURE 4944**

TGACCCAGGACTCTTTGTTTATTGCTGTGATTTTCTTCCACAGCTATAGAACTGGTCCAGACAAATTCAGAATA  
TGATCCTTCTCGGTGTTTTGCCTTTGTTTCACGACCTGTGTGATGAAGAGAAGAGTTACCCAGTGCCCAAGGGCAG  
TCTTGATATTATCATTCTCATATTTGTTCTTTTCAGCAATTGTTCCAGACAAGATGCAGAAGGCTATCAACAGGCT  
GAGCAGGCTTCTGAAACCTGGCGGGATGATGCTTCTGCGAGATTACGGCCGCTATGACATGGCTCAGCTTCGGTT  
TAAAAAAGGTCAGTGCTCTATCTGGAATTTCTACGTGAGAGGTGATGGAACCAGAGTTTACTTCTTCACACAAGA  
GGAAGTGGACACGCTTTTCACCACTGCTGGACTGGAAAAAGTTCAGAACCTGGTGGATCGCCGACTGCAGGTGAA  
CCGAGGAAAGCAACTGACAATGTACCGGGTTTGGATTGAGTGCAAACTACTGCAAGCCCCTTCTGTCCAGCACCAG  
CTGAGAGGCACCTGCTGCCAACACGATGCAAGCCCATTTGTGTTTCCGGGCTTTTTTAAAAAAAATTGTAGCAC  
TGGGCGTGGTGCATGCCTGTAATCCAGCCACTCAGGAGGCTGAGGCGGGGAGGATCCATTGAGCCCAGCAGTCC  
AACCTGGGCAAAATAGTGAGAGACCCTGTATCTGAAAGTAATAATAAAAAATAAAAAATATAAATGAGGTCTCGTT  
GATGTTGGACAATTCAAGAATTCAGACTTGAACCTTAAACCTAGGAAAAGTTACTTTGTATCAGGATTCTAACAA  
TTATGCTTCATATTTGTGAAGTCCTTTAAACATAATTTTCTCAAGTTCTTTCTTTGAGATCTCAATCTGTCTTA  
GCATTTTGTAACTAATAACTGAAATTTTATTCAAAGGAATTGTAAACCTTAAACCACCAATTTATTTCCATGTGA  
AAAAGTGTACATATGACAAGTGTTTTTTGACTGTAATTGCGTTAAATCTTTTGAGAAATGTAATGCCGGGCTAG  
GCAATTGCAGTTAATACATACAGAGGTTAGTGAAGGCTTATTAAGTTGTAGGGGAAGCAAGCTGGGAAGAATCA  
GATCAGATATTTTCCTGAC

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**FIGURE 4945**

AGG TTCAGCTT GTTGGTTTAGATGAGGAGAGTT CAGAGTTTATTTGCAGAAACACCTTTGACCACCCATACCCCA  
CCACAAAGCTCATGTGGATCCCTGACACAAAAGGCGTCTATCCAGACCTACTGGCAACAAGCGGTGACTATCTCC  
GTGTGTGGAGGGTTGGTGAAACAGAGACCAGGCTGGAGTGTTTGCTAAACAATAATAAGAACTCTGATTTCTGTG  
CTCCCTTGACCTCCTTTGACTGGAATGAGGTGGATCCTTATCTTTTAGGTACCTCAAGCATTGATACGACATGCA  
CCATCTGGGGGCTGGAGACAGGGCAGGTGTTAGGGCGAGTGAATCTCGTGTCTGGCCACGTGAAGACCCAGCTGA  
TCGCCCATGACAAAGAGGTCTATGATATTGCATTTAGCCGGGCCGGGGGTGGCAGGGACATGTTGCCTCTGTGG  
GTGCTGATGGCTCGGTGCGGATGTTTGACCTCCGCCATCTAGAACACAGCACCATCATTTACGAAGACCCACAGC  
ATCACCCACTGCTTCGCCTCTGCTGGAACAAGCAGGACCCTAACTACCTGGCCACCATGGCCATGGATGGAATGG  
AGGTGGTGATTCTAGATGTCCGGGTTCCCTGCACACCTGTCGCCAGGTTAAACAACCATCGAGCATGTGTCAATG  
GCATTGCTTGGGCCCCACATTCATCCTGCCACATCTGCACTGCAGCGGATGACCACCAGGCTCTCATCTGGGACA  
TCCAGCAAATGCCCCGAGCCATTGAGGACCCTATCCTGGCCTACACAGCTGAAGGAGAGATCAACAATGTGCAGT  
GGGCATCAACTCAGCCCGACTGGATCGCCATCTGCTACAACAACCTGCCTGGAGATACTCAGAGTGTAGTGTGGT  
GGCGCTGTGCCACGAGGCAGGGGCTTTTGATTTCCTGCCTCTGCCCCACCCCCAAAGTAAGAAGAAACATGTT  
TCCAGTGGCCAGTATGTCTTTCATTGCTTTGCACCCACTGTTACCAGAAGCTGCTCTAGGAGTTCTG GCCAGTC  
ACCCCATCGCCCTCTGTGGCAGACTCAGTGCTGTGTGGCGCCTCCTCAGCCAGGGCTGAGTTTAAAGATTTCT  
CTCCTTTCCTCTTCCTTTGGTTCCTCAATTAA



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**FIGURE 4946**

ATGAGTGGCTCCTTCGATCGCAAGCTCAGCAGCATCCTCACCGACATCTCCAGCTCCCTTAGCTGCCATGCGGGC  
TCCAAGGACTCGCCTACCCTGCCCGAGTCTTCTGTCACTGACCTGGGCTACTACAGCGCTCCCCAGCACGATTAC  
TACTCGGGCCAGCCCTATGGCCAGACGGTGAACCCCTACACCTACCACCACCAATTCAATCTCAATGGGCTTGCA  
GGCACGGGCGCTTACTCGCCCAAGTCGGAATATACCTACGGAGCCTCCTACCGGCAATACGGGGCGTATCGGGAG  
CAGCCGCTGCCAGCCCAGGACCCAGTGTCTGGTGAAGGAGGAGCCGGAAGCAGAGGTGCGCATGGTGAATGGGAAG  
CCCAAGAAGGTCCGAAAGCCGCGTACAATCTACTCCAGCTACCAGCTGGCCGCCCTGCAGCGCCGCTTCCAGAAG  
GCCCAGTACCTGGCGCTGCCCAGCGCGCCGAGCTGGCCGCGCAGCTGGGCCTCACGCAGACACAGGTGAAAATC  
TGGTTCCAGAACCGCCGTTCCAAGTTCAAGAACTCTACAAGAACGGGGAGGTGCCGCTGGAGCACAGTCCCAAT  
AACAGTGATTCCATGGCCTGCAACTCACCACCATCACCGCCCTCTGGGACACCTCTTCCCACTCCACTCCGGCC  
CCTGCCCCAGTCAGCTGCCCCGCGCTCCCATACAGTGCCCTCCCCCAGCTACCTGGACGACCCACCAACTCC  
TGGTATCACGCACAGAACCTGAGTGGACCCCACTTACAGCAGCAGCCGCTCAGCCAGCCACCCTGCACCATGCC  
TCTCCCGGGCCCCCGCCCAACCCTGGGGCTGTGTACTTGA

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**FIGURE 4947**

MSGSFDRKLSSILTDISSSLSCHAGSKDSPTLPRESSVTDLGYYSAPQHDIYSGQPYGQTVNPTYHHQFNLNGLA  
GTGAYSPKSEYTYGASYRQYGAYREQPLPAQDPVSVKEEPEAEVRMVNGKPKKVRKPRTIYSSYQLAALQRRFQK  
AQYLALPERAELAAQLGLTQTQVKIWFQNRRSKFKKLYKNGEVPLEHSPNNSDSMACNSPPSPALWDTSSHSTPA  
PARSQLPPPLPYASPSYLDPTNSWYHAQNLSGPHLQQQPPQPATLHHASPGPPPNPGAVY

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**FIGURE 4948**

CCCGTCACCAAGCTGGGCCGCTTGGTCAAGGAAATGAAGATCAAATCCCTGGAGGAGATCTATCCCTTCTCCCTG  
CCCATTAAAGGTATCTGAGATCATTGACTTTTTCTGGGGGCCTCTCTTAAGGACGAGGTTTGAAGATTATGTCG  
GTGCAGAAGCAGACCCGCTGCGGCTCTGTGCTGGTGCCTCATCCCTGCACCCAGGGGCACTGGCATTGTCTCC  
GCACCTGTGCCCCAAGAAGCTGCTCATGATAGCTGGTATCGATGACTGCTACACCTCAGCCCGGGGCTGCACTGCC  
ACCCTGGGCAACTTCGCCAAGGCCACCTTTGACGCCATCTCTAAGACCTACAGCTACCTGACCCCGACCTCTGG  
AAGGAGACTGTATTTACCAAGTCTCCCTGTCAGGAATTCAGTACCACCTCGTCAAGACCCACACCAGAGTCTTC  
GTGCAGCAGACCCAGGCTCCAGCTGTGGCTACAACATAGGGTTTTTATACAAGAAAAATAAAGTGAATTAAGC

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**FIGURE 4949**

MKIKSLEEIYPFSLPIKVSEIIDFFLGASLKDEVLKIMSVQKQTRCGSVLVRLIPAPRGTGIVSAPVPPKLLMIA  
GIDDCYTSARGCTATLGNFAKATFDAISKTYSLTPDLWKETVFTKSPCQEFIDHLVKTHTRVFVQQTQAPAVAT  
T

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**FIGURE 4950**

AGACCCCTTTTACAAGATGGCGCCGAAAGCGAAGAAGGAAGCTCCTGCCCTCCTAAAGCCGAAGCCAAAGCGAA  
GGCTTTAAAGGCCAAGAAGGCAGTGTTGAAAGGTGTCCACAGCCACAAAAAGAAGAAGATCCGCACGTCACCCAC  
CTCCGGCAGCCGAAGACACTGCGACTCTGGAGACAGCCAAATATCCTCGGAAGAGCGCTCCCAGGAGAAACAA  
GCTTGACCACTATGCTATCATCAAGTTTCCGCTGACCACTGAGTCTGCCATGAAGAAGACAGAAGACAACAACAC  
ACTTGTTTCCTTGTGGATGTTAAAGCCAACAAGCACCAGATTAAACAGGCTGTGAAGAAGCTCTATGACATTGA  
TGTGGCCAAGGTCAACACCCTGATTTGGCCTGATGGAGAGAAGAAGGCATATGTTCGACTGGCTCCTGGTTACGA  
TGCTTTGGATGTTGCCAACAAAATTGGGATCATCTAAACTGAGTCCAGCTGCCTAATTCTGAATATATATATATA  
TATATATATATATATATATATCTTTTCACCAT

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**FIGURE 4951**

GCAACCGCAGCCCAGCCCCAGTCCGGGAGGAAGTTCTGCCGGGCGCTCTCCGCCGGTGCCTCACTGGTTATAGTG  
CTATACAGGAAACCTGGCAGCGCCGGAGCCGCGCGGTTCGAGGAGGGAGCGCGGGACGCCGAGCCCACGCGCGCCT  
GCCGGGACAAGTGGAGACGAGGCCGGCGAGCGGACGCCCCGAGGTTTGGCGAAGGAGCTGTGGCCGGGTCCCTT  
CTTATCCAGCCCCGAGACACTGCGCTCCGGTGGGCGTCCCTGCGCTGGGAATCCCTCTCGGAGTTTTTCCAGGCC  
GGCCGGGTGTCTCCGGGAAAGGCCCTGTTGGGGGAGGTGGGCCCGGAGCTGGCAGGTCTACAATCCGGTTGGAAG  
GGCTCGCAGTGGGTGATTGAGGTGCCAATGACCTCCCCGCGAACGGGAACGCCGCACTAGACAACCAGCCCCA  
GACCGGCATTCCCAGAGCCGAGGCCGGGAGGGACGAGGGACTCCGGGACAGCAAATCCCCGGGGGAGAAGGGAA  
GGGGGAAGCGGGACAGGGGAGGCCACCCTCCTTGGGCTCCGCTAGCGACCAGCCAGCGCCCCCTTCAGACGCAG  
CCTTCCTGGCTCCGGACCCCGGCTTTCTGCTCCGGTCTCTGCCAATGCCCCCAAGGTCCCCAGCAGAGGCAT  
TCAGGTTCTCTCGCCCCGCCAGACGCAGCTTCTTTGGGTATGGGTGACAGCACTCCTGAGCGTGCCTGTCCC  
TATTCGCTGCCGTTGCCAGCTCCGATTCCGCGAAACCTCTCCGGCACCACCTCGGAAGCCCCGCCAGGGCGATG  
GTCCGGGCTTAACCTGCCGGCCCCGCCACCCGGCCCTTGGGCTCCCTGAGGCCCGCCAGCAGACACCGGAGAG  
CAATGGTGTGATCTCCGCACACTGCAACCTCTGCCTCCAGGGTTCAAGTGGTTCTCTGCCTCAGCCTCCCAAGC  
AGATGGGACTACAGGTACTGTTAGTTAACTCTCAAGGAGAAATTCACGGTTGAGCACCAGAAAAGAAAGTGGTCA  
TGAAAGGAAGTATCAACAATTATCTTAAATTGGGTCAAGAAGGAAGTATCGCTCTACCACAATCAATACTCCA  
CTAATTCAATTGCTTTGAATAAGCACCAGCACAGAGAAGACCATGATAAGAGAAGGCATCTTGACATAAGTTCT  
GTCTGACTCCAGCAGGAGAGTTCAAATGGAACGGTTCTGTCCATGGGTCCAAAGTTCTTACCATATCTACTCTGA  
GACTGACTATCACCCAATTAGAAAACAACATCCCTTCATCCTTCTTCATCCCAACCGGGCATCACATAGGGCAA  
ACTGGATCAAGGCAGTTGATGTGTAGCAAACCTCAGAGAATTTGCATTGGCTTAGCCATTTTGGAGTGTGCAG  
TTAAACCAAGTTGTGATGCTACCAATATGGCGAGAATCTTTAGGACATACCAGCTTTCTCCCTTTGTCTCATAACC  
ATGTCCACCAATGAGAATGCTAATACACAAGCTGCCCATCTTCACAGATCTAAGAACAAGGGAAGGACAGTACA  
GAAACGAGCGCTCACAGAATAGAGGTCAATGTGGAGCTGAGGAAAGCTAAGAAGGATGACCAGATGCTGAAGAGG  
AGAAATGTAAGCTCATTTCCTGATGATGCTACTTCTCCGCTGCAGGAAAACCTGCAACAACCGGACTCCTGCCCT  
AAGAGCCATAGGGAATATCGTCACTGGTACAGATGAACAGACTCAGGTTGTGATTGATGCAGGAGCACTCGCCGT  
CTTTCCAGCCTGCTCACCAACCCCAAACTAACATTGAGAAGGAAGCTACGTGGACAATGTCAAACATCACAGC  
CAGCCGCCAGGACCAGATACAGCAAGTTGTGAATCATGGATTAGTCCCATTCCTTGTGAGCGATCTCTTAAGAT  
TTTGAGACACAAAAGGAAGCTGTATGGGCCGTGGAACAGTTGAACAGATTGTGTACCTTGTTCAGTGTGGCATAA  
TAGAACCGTTGATGAACCTCTTACCTGCAAAAGATACCAAGATTATTCTGGTTATCCTGGATGCCATTTCAAATA  
TCTTTCAGGCTGCTGAGAACTAGGTGAACTGAGAACTTAGTATAATGATTGAAGAATGTGGAGGCGTAGACA  
AAATTGAAGCTCTACAAAACCATGAAAATGAGTCTGTATATAAGGCTTCATTAAGCTTAACTGAGAAGTATTTCT  
CTGTAGAGCTGCCAGAGCAGAGCTGAGCCACCCATTGCTGGAGAGGACATCCACGCAGGCCTGGACGAGCCGGAC  
TGCCTTACTAAGGATTTCTCCGTATCTGACTGCAACTCAGCACTCAGCTGCATGCCGGACAGGAAGAGGAAGAT  
CAAAACGTTGTGCCAGAACTACCTCTGAAGGCTACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTTAAC  
TTTTAGATCATGTAGCTGAGGCATAAATTTGTGTGTACTATGTTTGGTAFTTTGTCTTATTGTTTCTCTACTAA  
GAACTCTTTCTTAAATGTGGTTTGTATTGTAGCACTTTTTACTGAACTATACTTGAACAGTTCCAAGTGA  
CATACTGTATGAAGCTTGCTCTGACTAGGTTTCTAATTTCTATGTGGAATTTCTATCTTGCAGCATCCTGTA  
AATAAACATTCAAGTCCACCCTTTTCTTGACTTC

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**FIGURE 4952**

MTSPRTGTPALDNQPQTGIPRAAGGRDAGTPGQQIPGGEGKGEGGTGEAHPPWAPLATSQRPFRSLPGSGPRLS  
APVLVPMPPKVP SRGIQVPPRPAQTQLLWVWVTALLSVAVPIRCRCQLRFRETSPAPPRKPRPGRWSGPNLPAPP  
TRPLGSLRPAQQTPE SNGVISAHCNLC LQGSSGSPASASQADGTTGTGS

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**FIGURE 4953**

GCCAGTGAATTCGGGGGCTCAGCCCTCCTCCCTCCCTTCCCCCTGCTTCAGGCTGCTGAGCACTGAGCAGCGCTC  
AGAATGGGAAGCCATCGCCAAATATGACTTCAAAGCTACTGCAGACGACGAGCTGAGCTTCAAAGGGGGGACATC  
CTCAAGGTTTTGAACGAAGAATGTGATCAGAACTGGTACAAGGCAGAGCTTAATGGAAAAGACGGCTTCATTCCC  
AAGAACTACATAGAAATGAAACCACATCCGTGGTTTTTTGGCAAAATCCCCAGAGCCAAGGCAGAAGAAATGCTT  
AGCAAACAGCGGCACGATGGGGCCTTTCTTATCCGAGAGAGTGAGAGCGCTCCTGGGGACTTCTCCCTCTCTGTC  
AAGTTTGGAACGATGTGCAGCACTTCAAGGTGCTCCGAGATGGAGCCGGGAAGTACTTCTCTGGGTGGTGAAG  
TTCAATTCTTTGAATGAGCTGGTGGATTATCACAGATCTACATCTGTCTCCAGAAACCAGCAGATATTCTGCGG  
GACATAGAACAGGTGCCACAGCAGCCGACATACGTCCAGGCCCTCTTGACTTTGATCCCCAGGAGGATGGAGAG  
CTGGGCTTCCGCCGGGGAGATTTTATCCATGTCATGGATAACTCAGACCCCAACTGGTGGAAGGAGCTTGCCAC  
GGGCAGACCGGCATGTTTTCCCGCAATTATGTCACCCCCGTGAACCGGAACGTCTAAGAGTCAAGAAGCAATTAT  
TTAAAGAAAGTGAAAAATGTAAAACACATACAAAAGAATTAAACCCACAAGCTGCCTCTGACAGCAGCCTGTGAG  
GGAGTGCAGAACACCTGGCCGGGTCAACCTGTGACCTCTCACTTTGGTTGGAACTTTAGGGGTGGGAGGGGGC  
GTTGGATTTAAAAATGCCAAACTTACCTATAAAATTAAGAAGAGTTTTTATTACAAATTTTCACTGCTGCTCCTC  
TTTCCCTCCTTTGTCTTTTTTTTCATCCTTTTTTCTCTTCTGTCCATCAGTGCATGACGTTTAAGGCCACGTAT  
AGTCCTAGCTGACGCCAATAATAAAAAACAAGAAACCAAAAAAAAAAACCCGAATTCA



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**FIGURE 4954**

MEAIKYDFKATADDELSFKRGDILKVLNEECDQNWYKAELNGKDGFI PKNYIEMKPHPWFFGKIPRAKAEEMLS  
KQRHDGAFLIRESESAPGDFSLSVKFGNDVQHFKVLRDGAGKYFLWVVKFNSLNELVDYHRSTSVSRNQQIFLRD  
IEQVPQQPTYVQALFDFDPQEDGELGFRRGDFIHVMDNSDPNWWKGACHGQTGMFPRNYVTPVNRNV

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**FIGURE 4955**

GGCACGAGGGCTCTGAGCGGGAGGCCTGAGCGGGAAGCATTGGCGTCCGAGCGACTTCTAGGAGCCTGGGGTTCG  
GCGCTATGGAGGAGCTCGATGGCGAGCCAACAGTCACTTTGATTCCAGGCGTGAATTCCAAGAAGAACCAAATGT  
ATTTTGACTGGGGTCCAGGGGAGATGCTGGTATGTGAAACCTCCTTCAACAAAAAGAAAAATCAGAGATGGTGC  
CAAGTTGCCCTTTATCTATATCATCCGTAAGGATGTAGATGTTTACTCTCAAATCTTGAGAAAACCTCTTCAATG  
AATCCCATGGAATCTTTCTGGGCCTCCAGAGAATTGACGAAGAGTTGACTGGAAAATCCAGAAAATCTCAATTGG  
TTCGAGTGAGTAAAAACTACCGATCAGTCATCAGAGCATGTATGGAGGAAATGCACCAGGTTGCAATTGCTGCTA  
AAGATCCAGCCAATGGCCGCCAGTTCAGCAGCCAGGTCTCCATTTTGTGAGCAATGGAGCTCATCTGGAACCTGT  
GTGAGATTCTTTTATTGAAGTGGCCCCAGCTGGCCCTCTCCTCCTCCATCTCCTTGACTGGGTCCGGCTCCATG  
TGTGCGAGGTGGACAGTTTGTGCGCAGATGTTCTGGGCAGTGAGAATCCAAGCAAACATGACAGCTTCTGGAAC  
TGGTGACCATCTTGGTGTGTCAGGGCCGGCTGGATGAGGCCGACAGATGCTCTCCAAGGAAGCCGATGCCAGCC  
CCGCTCTGCAGGCATATGCCGAATCATGGGGGACCTGATGAGGACAATGCCATTCTTAGTCTGGGAACACCC  
AGACACTGACAGAGCTGGAGCTGAAGTGGCAGCACTGGCACGAGGAATGTGAGCGGTACCTCCAGGACAGCACAT  
TCGCCACCAGCCCTCACCTGGAGTCTCTCTTGAAGATTATGCTGGGAGACGAAGCTGCCTTGTAGAGCAGAAGG  
AACTTCTGAGTAATTGGTATCATTTCCTAGTGACTCGGCTCTTGTACTCCAATCCCACAGTAAAACCCATTGATC  
TGCACTACTATGCCAGTCCAGCCTGGACCTGTTTCTGGGAGGTGAGAGCAGCCCAGAACCCCTGGACAACATCT  
TGTTGGCAGCCTTTGAGTTTGACATCCATCAAGTAATCAAAGAGTGCAGCATCGCCCTGAGCAACTGGTGGTTTG  
TGGCCACCTGACAGACCTGCTGGACCACTGCAAGCTCCTCCAGTCAACAACCTCTATTTGGGTCCAACATGA  
GAGAGTTCCTCCTGCTGGAGTACGCTCGGGACTGTTTGCTCATCCCAGCCTGTGGCAGCTGGGGTTCGATTACT  
TTGATTACTGCCCCGAGCTGGGCCGAGTCTCCCTGGAGCTGCACATTGAGCGGATACCTCTGAACACCGAGCAGA  
AAGCCCTGAAGGTGCTGCGGATCTGTGAGCAGCGGCAGATGACTGAACAAGTTCGCAGCATTGTGAAGATCTTAG  
CCATGAAAGCCGTCCGCAACAATCGCCTGGGTCTGCCCTCTCTTGGAGCATCCGTGCTAAGGATGCCGCCCTTG  
CCACGCTCGTGTGACAGAGTTCTCAGGGATTACTGTGAGCGAGGCTGCTTTTCTGATTGGATCTCATTGACA  
ACCTGGGGCCAGCCATGATGCTCAGTGACCGACTGACATTCTGGGAAAGTATCGCGAGTTCCACCGTATGTACG  
GGGAGAAGCGTTTTGCGACGCAGCTTCTCTCCTTCTGTCTTGATGACGTCTCGGATTGCCCTCGGTCTTTCT  
GGATGACTCTGCTGACAGATGCCTTGCCCCTTTTGGAACAGAAACAGGTGATTTTCTCAGCAGAACAGACTTATG  
AGTTGATGCGGTGTCTGGAGGACTTGACGTCAAGAAGACCTGTGCATGGAGAATCTGATACCGAGCAGCTCCAGG  
ATGATGACATAGAGACCACCAAGGTGGAATGCTGAGACTTTCTTGGCACGAAATCTTGCTCGGGCAATTATAA  
GAGAAGGCTCACTGGAAGGTCTCTGAGAACTGCTTCAATGTGGTATCTTTGTATGGCAATGTATATAGATTTTTT  
AAAAGAATAAATGTTGTTTTGCAAATGTAAAAAAAAAAAAAAAAAAAA

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**FIGURE 4956**

MEELDGEPTVTLIPGVNSKKNQMYFDWGPGEMLVCETSFNKKEKSEMVPSCPFYIIRKDVVDVYSQILRKLFNES  
HGIFLGLQRIDEELTGKSRKSQLVRVSKNYRSVIRACMEEMHQVAIAAKDPANGROFSSQVSILSAMELIWNLCE  
ILFIEVAPAGPLLLHLLDWVRLHVCEVDSLSADVLGSENPSKHDSFWNLVTILVLQGRLEARQMLSKEADASPA  
SAGICRIMGDLMRTPILSPGNTQTLTELELKWQHWHEECERYLQDSTFATSPHLESLLKIMLGDEAALLEQKEL  
LSNWHFLVTRLLYSNPTVKPIDLHYAQSSLDLFLGGESSPEPLDNILLAAFEFDIHQVIKECSIALSNNWFVA  
HLTDLLDHCKLLQSHNLYFGSNMREFLLLEYASGLFAHPSLWQLGVDYFDYCPGLGRVSLELHIERIPLNTEQKA  
LKVLRIEQROMTEQVRSICKILAMKAVRNNRLGSALSWSIRAKDAAFATLVSDRFLRDYCEGCFSDLDLIDNL  
GPAMMLSDRLTFLGKYREFHRMYGEKRFADAASLLLSLMTSRIAPRSFWMTLTLDALPLLEQKQVIFSAEQTYEL  
MRCLEDLTSRRPVHGESDTEQLQDDDIETTKVEMLRSLARNLARAIIREGSLEGS

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**FIGURE 4957**

GGTGCTGCTTGTGTGCTCGTTTGGTGCGGACCTGGTACCTCTTTTGTGAAGCGGCAGCTGAGGAGACTCCGGCGC  
TCGCCATGGCCGACGAAAAGCCCAAGGAAGGAGTCAAGACTGAGAACAACGATCATATTAATTTGAAGGTGGCGG  
GGCAGGATGGTTCTGTGGTGCGAGTTTAAGATTAAAGAGGCATACACCACTTAGTAACTAATGAAAGCCTATTGTG  
AACGACAGGGATTGTCAATGAGGCAGATCAGATTCCGATTGACGGGCAACCAATCAATGAAACAGACACACCTG  
CACAGTTGGAAATGGAGGATGAAGATACAATTGATGTGTTCCAACAGCAGACGGGAGGTGTCTACTGAAAAGGGA  
ACCTGCTTCTTTACTCCAGAACTCTGTTCTTTAAAGACCAAGATTACATTCTCAATTAGAAAACCTGCAATTTGGT  
TCCACCACATCCTGACTACTACCGTATAGTTTTCTCTATTCTTTCATTTCCCCCTTCCCCATTCTTTATTGTAC  
ATAAAGTAACTGGTATATGTGCACAAGCATATTGCATTTTTTTTTTTTTTAACTAAACAGCCAATGGTATGTTTT  
GATTGACATCAAGTGGAGACGGGATGGGGAAAAATACTGATTCTGTGAAAATACCCCTTTCTCCATTAGTGGCA  
TGCTCATTGAGCTCTTA

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**FIGURE 4958**

GCAGCGCGAGCTTCGGCCTCGGCTCTGTACCATGAAGAAGGGCCCCAGTGGCTATGGCTTCAACCTGCACAGCGA  
CAAGTCCAAGCCAGGCCAGTTCATCCGGTCAGTGGACCCAGACTCCCCGGCTGAGGCTTCAGGGCTCCGGGCCCCA  
GGATCGCATTGTGGAGGTGAACGGGGTCTGCATGGAGGGGAAGCAGCATGGGGACGTGGTGTCCGCCATCAGGGC  
TGGCGGGGACGAGACCAAGCTGCTGGTGGTGGACAGGGAACTGACGAGTTCCTCAAGAAATGCAGAGTGATCCC  
ATCTCAGGAGCACCTGAATGGTCCCCCTGCCTGTGCCCTTACCAATGGGGAGATACAGAAGGAGAACAGTCGTGA  
AGCCCTGGCAGAGGCAGCCTTGGAGAGCCCCAGGCCAGCCCTGGTGAGATCCGCCTCCAGTGACACCAGCGAGGA  
GCTGAATTCCCAAGACAGCCCCCAAAACAGGACTCCACAGCGCCCTCGTCTACCTCCTCCTCCGACCCCATCCT  
AGACTTCAACATCTCCCTGGCCATGGCCAAAGAGAGGGCCCCACCAGAAACGCAGCAGCAAACGGGCCCCGCAGAT  
GGACTGGAGCAAGAAAAACGAACCTTTCAGCAACCTCTGAGCGCCCTGCTGCCACCCAGTGACTGGCAGGGCCGA  
GCCAGCATTCCACCCACCTTTTTCTTCTCCCCAATTACTCCCTGAATCAATGTACAAATCAGCACCCACATC  
CCCTTTCTTGACAAATGATTTTTCTAGAGAACTATGTTCTTCCCTGACTTTAGGGAAGGTGAATGTGTTCCCGTC  
CTCCCGCAGTCAGAAAGGAGACTCTGCCTCCCTCCTCCTCACTGAGTGCCTCATCCTACCGGGTGTCCCTTTGCC  
ACCCTGCCTGGGACATCGCTGGAACCTGCACCATGCCAGGATCATGGGACCAGGCGAGAGGGCACCTCCCTTCC  
TCCCCCATGTGATAAATGGGTCCAGGGCTGATCAAAGAACTCTGACTGCAGAACTGCCGCTCTCAGTGGACAGGG  
CATCTGTTACCCCTGAGACCTGTGGCAGACACGTCTTGTTCATTGATTTTTGTTAAGAGTGCAGTATTGCAGA  
GTCTAGAGGAATTTTTGTTTCCCTTGATTAACATGATTTTCTGGTTGTTACATCCAGGGCATGGCAGTGGCCTCA  
GCCTTAAACTTTTGTTCCTACTCCACCTCAGCGAACTGGGCAGCACGGGGAGGGTTGGCTACCCCTGCCCAT  
CCCTGAGCCAGGTACCACCATTGTAAGGAAACACTTTCAGAAATTCAGCTGGTTCCCTCAAACC

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**FIGURE 4959**

MSADAAAGAPLPRLCCLEKGPNGYGFLHGEKGKLGQYIRLVEPGSPAEEKAGLLAGDRLVEVNGENVEKETHQQV  
VSRIRAALNAVRLLVVDPETDEQLQKLGVQVREELLRAQEAPGQAEPPAAAEVQGAGNENEPREADKSHPEQREL  
RPRLCTMKKGPSGYGFNLHSDKSKPGQFIRSVDPDSPAEASGLRAQDRIVEVNGVCMEGKQHGDDVVS AIRAGGDE  
TKLLVVDRETDEFFKKCRVIPSQEHLNGPLPVPFTNGEIQKENSREALAEAALES PRPALVRSASSDTSEELNSQ  
DSPPKQDSTAPSSTSSSDPILDFNISLAMAKERAHQKRSSKRAPQMDWSKKNELFSNL

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**FIGURE 4960**

CGCCCAGCAGCCCGTGGGCGAGCGCGGCGGAGCGAGCGGGGCCGGCGGGCGCGCGAGGGACGCCGAGGCCTCG  
GGCGGGGGCTGGCCCGGGTTCCAGGTCTCCAGTGGGGGCTGCAGACTAAGCAAAATGAGGCGGTTCTTGAGGCC  
AGGGCATGACCCTGTGCGGGAGAGGCTCAAGCGGGACCTGTTCAGTTTAAACAAGACGGTGGAGCATGGCTTCCC  
GCACCAGCCCAGCGCCCTCGGCTACAGCCCGTCCCTGCACATCCTGGCCATCGGCACCCGTTCTGGAGCCATCAA  
GCTCTACGGAGCCCCAGGCGTGGAGTTCATGGGGCTGCACCAGGAGAACAACGCTGTGACGCAGATCCACCTCCT  
GCCCCGCCAGTGCCAGCTGGTCACCCTGCTGGATGACAACAGCCTGCACCTTTGGAGCCTGAAGGTCAAGGGCGG  
GGCATCGGAGCTGCAGGAGGATGAGAGCTTACACTGCGTGGACCCCCAGGGGCTGCCCCAGTGCCACACAGAT  
CACCGTGGTCTTCCACATTCTCTGCGAGCTGCTCTACCTGGGCACCGAGAGTGGCAACGTGTTTGTGGTGCA  
GCTGCCAGCTTTTCGTGCGCTGGAGGACCGGACCATCAGCTCGGACGCGGTGCTGCAGCGGTTGCCAGAGGAGGC  
CCGCCACCGCGTGTGTTGAGATGGTGGAGGCACTGCAGGAGCACCTCGAGACCCCAACCAGATCCTGATCGG  
CTACAGCCGAGGCTCGTTGTCATCTGGGACCTACAGGGCAGCCGCGTCTCTACCACTTCTCAGCAGCCAGCA  
ACTGGAGAACATCTGGTGGCAGCGGGACGGCCGCTGCTCGTCAGCTGTCACTCTGACGGCAGCTACTGCCAGTG  
GCCCCGTGTCCAGCGAAGCCCAGCAACCAGAGCCCCCTCCGAGCCTCGTGCCTTACGGTCCCTTTCTTGCAAAGC  
GATTACCAGAATCTCTGGCTGACCACTAGGCAGGGGTTGCCCTTACCATCTTCCAGGGTGGCATGCCACGGGC  
CAGCTACGGGGACCGCCACTGCATCTCAGTGATCCACGATGGCCAGCAGACGGCCTTCGACTTCACTCCCGTGT  
CATCGGCTTCACTGTCTCTACAGAGGCAGACCCTGCAGCCACCTTTGACGACCCCTATGCCCTGGTGGTGTCTGGC  
TGAGGAGGAGCTGGTGGTGATTGACCTGCAGACAGCAGGCTGGCCACCGGTCCAGCTGCCCTACCTGGCTTCTCT  
GCACTGTTCCGCCATCACCTGCTCTCACCAGCTCTCCAACATCCCGCTGAAGCTGTGGGAGCGGATCATTGCCGC  
CGGCAGCCGGCAGAACGCACACTTCTCCACCATGGAGTGGCCAATTGATGGTGGCACCAGCCTGACCCAGCCCC  
ACCCAGAGGGACCTGCTGCTCACAGGGCAGGAGACGGCAGGCTGCGGTTCTGGGATGCCTCGGGTGTCTGCCT  
GCGGTGCTCTACAACTCAGCACTGTGCGCGTGTTCCTACCGACACGGACCCCAACGAGAACTTCAGTGCCCA  
GGGCGAGGACGAGTGGCCCCACTCCGCAAGGTGGGCTCCTTTGACCCCTACAGTGATGACCCCGGCTGGGCAT  
CCAGAAGATCTTCTCTGCAAGTACAGCGGCTACCTGGCTGTGGCAGGCACGGCAGGGCAGGTGCTGGTACTGGA  
ACTGAATGACGAGGCAGCGGAGCAGGCTGTGGAGCAGGTGGAGGCCGACCTGCTGCAGGACCAAGAGGGCTACCG  
CTGGAAGGGGCACGAGCGCTTGGCAGCCCGCTCAGGGCCCGTGCCTTTGAGCCTGGCTTTACGCCCTTCGTGTT  
GGTGCAGTGTGACCCCCGGCTGTGGTCACCTCCTTGGCCCTGCACTCTGAGTGGCGGCTCGTGGCCTTCGGCAC  
CAGCCATGGCTTTGGCCTCTTTGACCACCAGCAGCGCGGCAGGTCTTTGTTAAGTGCACACTGCACCCAGTGA  
CCAGCTGGCCTTGGAGGGCCACTCTCCCGCTCAAGTCCCTCAAGAAGTCTTGCCTCAGTCATTCCGCCGGAT  
GCGTGGAGCCGGGTGTCCAGCCGGAAGCGGCACCCGGCTGGCCCCCAGGAGAGGCACAGGAGGGGAGTGCCAA  
GGCTGAGCGGCCAGGCCTCCAGAACATGGAGCTGGCGCCTGTGCAGCGCAAGATCGAGGCTCGCTCGGCAGAGGA  
CTCCTTACAGGCTTCGTCCGGACCCCTGTACTTTGCTGACACCTACCTGAAGGACAGCTCCCGGCACTGCCCCTC  
GCTGTGGGCTGGCACCAATGGGGGCACCATCTATGCCTTCTCCCTGCGTGTGCTCCCGCCGAGCGGAGAATGGA  
TGAGCCTGTGCGGGCAGAGCAGGCCAAGGAGATCCAGCTGATGCACCGGGCGCGGTTGGTGGGCATCCTGGTGT  
CGACGGACACAGCGTACCCCTTCCCGAGCCCTCGAAGTGGCCATGATCTGTGCAAGAGCCCTGACATGCAGGG  
AAGCCACCAGCTGCTCGTCTGATCAGAGGAGCAGTTCAAGGTGTTACGCTGCCCAAGGTGAGTGCCAAGCTGAA  
GTTGAAGCTGACGGCCCTGGAGGGCTCAAGAGTGGCGGGGTCAGCGTGGCCCACTTCCGCGAGTGTGAGCCGA  
GGACTACGGGGAGCACCACTGGCAGTCTTACCAACCTGGGCGACATCCAGGTGGTCTCGCTGCCCCCTGCTCAA  
GCCCCAGGTGCGCTACAGTGCATCCGCCGGGAGGACGTGAGTGGCATCGCCTCCTGCGTCTTACCAAATATGG  
CCAAGGCTTCTACCTGATCTCACCTCGGAGTTTGAAGCTTCTCTCTTCCACCAAGTGGTGGTGGAGCCCCG  
GTGTCTGGTGGATTACAGCAGAAACCAAGAACCCAGCCCTGGTAACGGTGGCGGGCCCCAAGAAGGCCCGAGCCG  
AGCCAGGAACTCAGGGACTCAGAGTGATGGCGAGGAGAAGCAGCCCGGCTGGTGTGAGCGCGCTCTGCTCAG  
TGATGAGAGAGCGGCAACTGGCGTTACATCGAGCCGCGTGGGGTGCAGCCTCAGCAATGGCGGAGCAGAGTGA  
GTGGCTGAGCGTCCAGGCTGCGCGATGAGCACACACTACTGATGGCCTTTCGGGGTCCCTGCCCCAACCGG  
AGAGGCCGGTGCACAGGGCCCCGCCAGGGGCTGGGGGATCCCGGCTTCCACAATGCAGCTGCTCTGGGCCTCGG  
GAGAGGAGAGACCCAGTCCCTGGGCTGCCCTTCCCGGCGCTCGTCTGTCTGGGTCTTTGGTCAATGTTGCAC  
AGTTTTTATTGCTCCCATCCCTTTTTGTAGTGGGCTGGGTTTTAAGTTATAAATGTTAACTGCCTCTGGGTGAAA  
AAGTTTTTAATAAACACCTATTACCTCTTG

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**FIGURE 4961**

MRRFLRPGHDPVRERLKRDLFQFNKTVEHGFPHQPSALGYSPSLHILAIGTRSGAIKLYGAPGVFEFMGLHQENNA  
VTQIHLLPGQCQLVTLLDDNSLHLWSLKVKGGAELQEDESFTLRGPPGAAPSATQITVVLPHSSCELLYLGTES  
GNVFFVQLPAFRALEDRTISSDAVLQRLPEEARHRRVFEMVEALQEHPRDPNQILIGYSRGLVVIWDLQGSRLY  
HFLSSQQLENIWWQRDGRLLVSCHSDGSYCQWPVSSEAQQPEPLRSLVPYGPFPCKAITRILWLTTROGLPFTIF  
QGGMPRASYGDRHCISVIHDGQQTAFDFTSRVIGFTVLTEADPAATFDDPYALVVLAEELVVIDLQTAGWPPVQ  
LPYLASLHCSAITCSHHVSNIPKLWERIIAAGSRQNAHFSTMEWPIDGGTSLTPAPPQRDLLLLTGHDGTVRFW  
DASGVCLRLLYKLSTVRVFLTDDPNENFSAQGEDEWPLRKVGSFDPYSDDPRLGIQKIFLCKYSGYLAVAGTA  
GQVIVLELNDEAAEQAVEQVEADLLQDQEGYRWKGHERLAARSGPVRFEFGFQPFVVLVQCQPPAVVTSALHSEW  
RLVAFGTSHGFLFDHQRRQVFVKCTLHPSDQLALEGPLSRVKSLLKSLRQSFRMRRSRVSSRKRHPAGPPGE  
AQEGSAKAERPGLQNMELAPVQRKIEARSAEDSFTGFVRTLYFADTYLKDSSRHCPSLWAGTNGGTIYAFSLRVP  
PAERRMDEPVRAEQAKEIQLMHRAPVVGILVLDGHSVPLPEPLEVAHDLSKSPDMQGSQLLVVSEEQFKVFTLP  
KVS AKLKLKLTALEGSRVRRVSVAHFGSRAEDYGEHHLAVLTNLGDIQVVSLLPKPQVRYSCIRREDVSGIAS  
CVFTKYGGFYLI SPSEFERFSLSTKWLEPRCLVDSAETKNHRPGNGAGPKKAPSRARNSGTQSDGEEKQPGLV  
MERALLSDERAATGVHIEPPWGAASAMAEQSEWLSVQAAR



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**FIGURE 4962A**

GTGGGTTCTGCCTAAAGCTGAATTCCCAGCGCTTTGGCTTCTCTGAGTTGGGGTTGTGTATAGGGGTCTTCGAAC  
AGTTCCGGAACCAGCCAGCAGCCTTTAATTCTTGGGCGGACCACGGCCGGTTCTGATATCTTAGGGTGAAGAGAG  
GGAGGTGTCGGCCAGCCAAGAGAGAAAATTGCGGATCTTGGGCTCAGGAAGACGGGAGAAGGGGTTCTGGGGTCCC  
GGGGTGGAAACGGTCGTCTGTTGCGCTTATAGAAGTAGGAGCAGAGGGTTCTCGTGGCAACCTTTTACTAC  
CTTTGCCTTAACCTTTGGCCACTGTTCTTGGCTAAGATGAGCAGCCACCATAACCACCTTTCCCTTTGACCCTGAG  
CGGCGAGTCCGGAGTACGCTGAAGAAGGTCTTTGGGTTTGAAGCTCTTTAAGACGCCCTTTACAGGAGAGTGCGACC  
ATGGCTGTAGTAAAAGGTAACAAGGACGTCTTTGTGTGCATGCCACAGGGGCAGGAAAATCCCTATGCTATCAG  
CTCCCTGCTCTGTTGGCCAAAGGCATCACCATTGTAGTCTCTCTCTCATTGCTTTGATTACAGGACCAAGTGGAC  
CACTTGCTAACCTTAAAGGTACGAGTAAGTTCCCTGAAGCTCTCTGCACAGGAAAGGAAGGAGCTGCTT  
GCTGACCTGGAGCGAGAAAAGCCCCAGACCAAGATTCTGTACATCACCACAGAGATGGCAGCTTCATCTCCTTC  
CAGCCACCCCTGAAGTCCCTGGTGTCCCGCCACCTGCTGTCTTACTTGGTGGTGGATGAAGCTCATTGTGTTTCC  
CAATGGGGGCATGACTTTTCGTCTGACTACTTGCCTCTGGGTGCCCTGCGCTCCCGCTGGGACATGCCCTTGT  
GTGGCTCTGACCGCCACAGCCACCCACAGGTCCAAGAGGACGTGTTTGTGCTGCCCTGCACCTGAAGAAACAGTT  
GCCATCTTCAAGACTCCCTGCTTCCGGGCCAACCTCTTCTATGATGTGCAATTCAAGGAAGTATTCTGATCCC  
TATGGGAACCTGAAGGACTTCTGCCTTAAGGCTCTTGGACAGGAGGCTGATAAAGGTTATCTGGCTGCGGCATT  
GTGTACTGCAGGACTAGAGAGGCTTGTGAACAGCTGGCCATAGAGCTCAGCTGCAGGGGTGTGAACGCCAAGGCT  
TACCATGCAGGGCTGAAGGCTCTGAAAGAACGCTGGTGCAGAACGACTGGATGGAGGAGAAGTCCCTGTAATT  
GTTGCAACCATTAGTTTTGGGATGGGAGTGGATAAAGCCAATGTCAGGTTTGTGCGCCATTGGAATATTGCCAAG  
TCTATGGCTGGGTACTACCAGGAGTCTGGCCGGGCTGGCAGGGATGGGAAGCCTTCTGGTGGCTCTCTATTAC  
TCCAGGAATGACCGGGACCAAGTCAGCTTCTGATCAGGAAGGAAGTAGCAAACTCCAGGAAAAGAGAGGAAAC  
AAAGCATCTGATAAAGCCACTATCATGGCCTTTGATGCCCTGGTGACCTTCTGTGAAGAACTGGGGTGCCGCCAT  
GCCGCCATTGCCAAGTACTTCGGGGATGCGCTGCCTGCCTGCGCCAAAGGCTGCGACCACTGCCAGAACCCACG  
GCCGTGCGGAGGCGGCTGGAGGCCTTGGAGCGCAGCAGCAGCTGGAGCAAGACCTGCATCGGGCCCTCCAGGGG  
AACGGCTTTGACCCGAGCTGTATGAGGGAGCGCGCAAGGGCTACGGGGACTTCAGCAGGTATGACGAAGGTTCT  
GGAGGCAGCGGGATGAAGGCAGAGATGAGGCCACAAGCGGGAGTGGAACCTTCTATCAGAAGCAGATGCAG  
CTGCGCAAGGGCAAAGACCCCAAGATAGAAGATTTGTACCCCAAGATGAGAAGTGTCCCTGAAAGAGGCTTCT  
AGCAGGAGGATCCCCAGGCTGACTGTGAAGGCAGGGAGCACTGCCTGCGGCTTCTGGAGGAGCGCTGAGCAGC  
AACCGCCAGTCAACACGTACCGCTGATGAAGCTGACCTCCGGGCCAAGGCCGTGGAGCTGGAACATGAGACATT  
CGGAACGCCAAGGTGGCCAACTCTACAAGGCCAGCGTGTGAAGAAGGTGGCCGATATCCACAGAGCCTCCAAG  
GATGGGCAGCCCTATGACATGGGAGGCAGTGCCAAGAGCTGCAGTGCCCAAGCTGAGCCCCCGGAGCCCAATGAG  
TATGACATTCCACCAGCCTCCCATGTGTACTCGCTCAAACCCAAGCGGGTGGGAGCTGGTTTCCCCAAAGGCTCC  
TGCCCCGTTCCAGACGGCCACGGAAGTATGGAGACAAGTCCGATCAGGGAGCAAGCCCCCAGCCGAGCGGGGA  
GGCGAGCAGCAGCCCCGAGCCGGCCCTGTGGCTCCTGGATGAGGATGGGAGTGAGCCCTCCCTGGGCCCAGA  
GGGGAGGTCCCTGGAGGCAGCGCTCACTATGGGGGGCCCTCCCTGAGAAGAAGGCCAAAAGTTCTCTGGGGGC  
AGCTCCCTTGCCAAGGGCCGGGCTAGCAAGAAACAGCAGCTCCTAGCCACAGCGGCCACAAGGATTCTCAGAGC  
ATCGCCCGCTTCTTCTGCCGAAGGGTGGAAAGCCAGCTCTGTGGCATCAGCCCCAGAGGCAGAAGGTGCCTGC  
CCCTCCTGTGAGGGGGTTTCAGGGACCCCGATGGCCCCAGAGAAGTACACAGGGGAGGAAGATGGAGCCGGGGGA  
CATTGCGCTGCCCCCTCCCCAGACTGAGGAGTGCCCTCAGGGAGAGGCCAAGCACCTGCCCGCCAGAGACAGGGC  
ACCCCTGAAGTCCAGCCACCCCTGCAAAGGACACATGGAAGGGCAAGCGGCCCTCGATCCAGCAGGAGAACCCA  
GAGAGCCAGCCTCAGAAGAGGCCACGCCCCCTCAGCCAAGCCCTCCGTCGTAGCTGAGGTCAAGGGCAGCGTCTCG  
GCCAGCGAACAGGGCACCTTGAATCCCACGGCTCAAGACCCCTTCCAGCTCTCCGCTCCTGGCGTCTCCTTGAAG  
GAGGCTGCAAAATGTTGTGGTCAAGTGCCCTACCCCTTTCTACAAGGAGGGCAAGTTTGCTTCCAAGGAGTTGTTT  
AAAGGCTTTGCCCGCCACCTCTCACACTTGCTGACTCAGAAGACCTCTCCTGGAAGGAGCGTGAAAGAAGAGGCC  
CAGAACCTCATCAGGCACTTCTTCCATGGCCGGGCCCCGGTGCAGAGCGAAGCTGACTGGCATGGCCTGTGTGGC  
CCCCAGAGATGACCAACTGCTGGCTGGGCAGGGCCCCGCTCTCCCCAGATTCTAGCATGGGTATCCTGGGGC  
TCACCTGCTGATGCCAGGGCCATCGTCTTTTCTCAGTCTTCTCCTTTTCAACCATACTTGGCTTTGGGGATGAC  
CCCAGACACCCCTGAATCCAGGTGAGAGGTGAGCCACCTTTCTTTCTGCTTGCAAAGCCTATAGACCTTCTC  
AGAGCGGTCTCATGGCTGGGTTTTCTGGGACACATGTCGAGGACAGAAGGTGGAGGGTGGTGGAGCTGCTGCTG

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**FIGURE 4962B**

GAAGAAGGGGAAGGAAGAGTGGCCCCTCCCCGAGTTCTAAGTCAGGATGAGGCCCACCTGTCCAAGGTATCGGAA  
CCTACCCAGGGGACCCTCAGATCCTCCACCCACTCCCCATCCATTACGATGCCAGCTTCCAGCCTTGCCCAGGT  
CAGAGCTGTGGCAGAGGAGAGGCAGCCAGGCCCTGTTCTGCTCAGCTCCTGCTCAGGAAGGCCAGGCCTGACAG  
ATGTTTGGGAGAGGAATAAAGTTGTGTTGTTGTGGGCATGCAGGCGTGACAC

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**FIGURE 4963A**

GGCTGCCCGCCTCGTCCCCACCCCCAACCCCCCGCGCCCGCCTCGGACAGTCCCTGCTCGCCCGCGCGCTGC  
AGCCCCATCTCCTAGCGGCAGCCAGGCGGGAGGGAGCGAGTCCGCCCCGAGGTAGGTCCAGGACGGGCGCACA  
GCAGCAGCCGAGGCTGGCCGGGAGAGGGAGGAAGAGGATGGCAGGGCCACGCCCCAGCCCATGGGCCAGGCTGCT  
CCTGGCAGCCTTGATCAGCGTCAGCCTCTCTGGGACCTTGGCAAACCGCTGCAAGAAGGCCCCAGTGAAGAGCTG  
CACGGAGTGTGTCCGTGTGGATAAGGACTGCGCCTACTGCACAGACGAGATGTTTCAGGGACCGGCGCTGCAACAC  
CCAGGCGGAGCTGCTGGCCGGGCTGCCAGCGGGAGAGCATCGTGGTCATGGAGAGCAGCTTCCAAATCACAGA  
GGAGACCCAGATTGACACCACCTGCGGCGCAGCCAGATGTCCCCCAAGGCCCTGCGGGTCCGTCTGCGGCCCGG  
TGAGGAGCGGCATTTTGTAGCTGGAGGTGTTTGTAGCCACTGGAGAGCCCCGTGGACCTGTACATCTCATGGACTT  
CTCCAACCTCCATGTCCGATGATCTGGACAACCTCAAGAAGATGGGGCAGAACCTGGCTCGGGTCTTGAGCCAGCT  
CACCAGCGACTACACTATTGGATTGTGGCAAGTTTGTGGACAAAGTCAGCGTCCCGCAGACGGACATGAGGCCTGA  
GAAGCTGAAGGAGCCCTGGCCCAACAGTGACCCCCCTTCTCCTTCAAGAACGTCATCAGCCTGACAGAAGATGT  
GGATGAGTTCGGAATAAACTGCAGGGAGAGCGGATCTCAGGCAACCTGGATGCTCCTGAGGGCGGCTTCGATGC  
CATCCTGCAGACAGCTGTGTGCACGAGGGACATTGGCTGGCGCCCGGACAGCACCACCTGCTGGTCTTCTCCAC  
CGAGTCAGCCTTCCACTATGAGGCTGTATGGCGCCAACGTGTGGCTGGCATCATGAGCCGCAACGATGAACGGTG  
CCACCTGGACACCACGGGCACCTACACCCAGTACAGGACACAGGACTACCGTCCGGTGGCCACCTGGTGCGCCT  
GCTCGCCAAGCACAAATCATCCCCATCTTTGCTGTACCAACTACTCCTATAGCTACTACGAGAAGCTTCACAC  
CTATTTCCCTGTCTCCTCACTGGGGTGTGTGCAGGAGGACTCGTCCAACATCGTGGAGCTGTGGAGGAGGCCTT  
CAATCGGATCCGCTCCAACCTGGACATCCGGGCCCTAGACAGCCCCGAGGCCCTCGGACAGAGGTCACTTCCAA  
GATGTTCCAGAAGACGAGGACTGGGTCTTTTACATCCGGCGGGGGGAAGTGGGTATATACCAGGTGCAGCTGCG  
GGCCCTTGAGCACGTGGATGGGACGCACGTGTGCCAGCTGCCGGAGGACCAGAAGGGCAACATCCATCTGAAACC  
TTCCTTCTCCGACGGCCTCAAGATGGACGCGGGCATCATCTGTGATGTGTGCACCTGCGAGCTGCAAAAAGAGGT  
GCGGTGAGCTCGCTGCAGCTTCAACGGAGACTTCGTGTGCGGACAGTGTGTGTGCAGCGAGGGCTGGAGTGCCA  
GACCTGCAACTGCTCCACCGGCTCTCTGAGTGACATTACGCCCTGCTGCGGGAGGGCGAGGACAAGCCGTGCTC  
CGGCCGTGGGAGTGCCAGTGCAGGCACTGTGTGTGTACGGCGAAGGCCGCTACGAGGGTCACTTCTGCGAGTA  
TGACAACCTCCAGTGTCCCGCACTTCCGGTTCCTGTGCAATGACCGAGGACGCTGCTCCATGGGCCAGTGTGT  
GTGTGAGCCTGGTTGGACAGGCCAAGCTGTGACTGTCCCTCAGCAATGCCACCTGCATCGACAGCAATGGGGG  
CATCTGTAATGGACGTGGCCACTGTGAGTGTGGCCGCTGCCACTGCCACCAGCAGTCGCTCTACACGGACACCAT  
CTGCGAGATCAACTACTCGCGGATCCACCCGGCCTCTGCGAGGACCTACGCTCCTGCGTGCAGTGCCAGGCGTG  
GGGCACCGGCGAGAAGAAGGGGCGCACGTGTGAGGAATGCAACTTCAAGGTCAAGATGGTGGACGAGCTTAAGAG  
AGCCGAGGAGGTGGTGGTGCCTGCTCCTTCCGGGACGAGGATGACGACTGCACCTACAGCTACACCATGGAAGG  
TGACGGCGCCCTGGGCCCAACAGCACTGTCTGGTGCACAAGAAGAAGGACTGCCCTCCGGGCTCCTTCTGGTG  
GCTCATCCCCCTGCTCCTCCTCCTGCGCTCCTGGCCCTGCTACTGCTGCTATGCTGGAAGTACTGTGCTG  
CTGCAAGGCCCTGCTGCACTTCTCCGCTGCTGCAACCGAGGTCACATGGTGGGCTTTAAGGAAGACCACTACAT  
GCTGCGGGAGAACCTGATGGCCTCTGACCACTTGGACACGCCCATGCTGCGCAGCGGGAACCTCAAGGGCCGTGA  
CGTGGTCCGCTGGAAGGTACCAACAACATGCAGCGGCTGGCTTTGCCACTCATGCCGCCAGCATCAACCCAC  
AGAGCTGGTGCCCTACGGGCTGTCTTGCGCCTGGCCCGCCTTTGCACCGAGAACCTGCTGAAGCCTGACACTCG  
GGAGTGCGCCAGCTGCGCCAGGAGGTGGAGGAGAACCTGAACGAGGTCTACAGGCAGATCTCCGGTGTACACAA  
GCTCCAGCAGACCAAGTCCGGCAGCAGCCCAATGCCGGGAAAAGCAAGACCACACCATTTGTGGACACAGTGT  
GATGGCGCCCCGCTCGGCCAAGCCGGCCCTGCTGAAGCTTACAGAGAAGCAGGTGGAACAGAGGGCCTTCCACGA  
CCTCAAGGTGGCCCCCGCTACTACACCTCACTGCAGACCAGGACGCCCGGGCATGGTGGAGTTCCAGGAGGG  
CGTGGAGCTGGTGGACGTACGGGTGCCCTCTTTATCCGGCTGAGGATGACGACGAGAAGCAGCTGCTGGTGGGA  
GGCCATCGACGTGCCCGCAGGCACTGCCACCTCGGCCCGCCGCTGGTAAACATCACCATCATCAAGGAGCAAGC  
CAGAGACGTGGTGTCTTTGAGCAGCCTGAGTTCTCGGTACGCCGCGGGGACCAGGTGGCCCGCATCCCTGTCTAT  
CCGGCGTGTCTGGACGCGGGGAAGTCCAGGTCTCCTACCGCACACAGGATGGCACCGCGCAGGGCAACCGGGA  
CTACATCCCCGTGGAGGGTGAAGTGTGTTCAGCCTGGGGAGGCCTGGAAGAGCTGCAGGTGAAGCTCCTGGA  
GCTGCAAGAAGTTGACTCCCTCCTGCGGGGCCGCCAGGTCCGCCGTTTCCACGTCCAGCTCAGCAACCCTAAGTT  
TGGGGCCACCTGGGCCAGCCCCACTCCACCACCATCATCATCAGGGACCCAGATGAAGTGGACCGGAGCTTCAC  
GAGTCAGATGTTGTATCACAGCCACCCCTCACGGCAGCTGGGCGCCCCGAGAACCCCAATGCTAAGGCCGC

**FIGURE 4963B**

[illegible]

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## FIGURE 4964

MAGPRPSPWARLLLLAALISVLSGTLANRCKKAPVKSCTECVRVKDCAYCTDEMFRDRRCNTQAELLAAGCQRE  
SIVVMESSFQITEETQIDTTLRRSQMSPQGLRVLRPGEERHFELEVFEPLSPVDLYIIMDFSNSMSDDLDNLK  
KMGQNLARVLSQLTSDYTIGFGKFVDKVSVPQTDMRPEKLKEPWPNSDPPFSFKNVISLTEDVDEFNRKLQGERI  
SGNLDAPEGGFDAILLQTAVCTRDIGWRPDSTHLLVFSTESAFHYEADGANVLAGIMSRNDERCHLDTTGTYTQYR  
TQDYPSVPTLVRLLAKHNIIPFAVTNYSYSYIEKLHTYFPVSSSLGVLQEDSSNIVELLEAFNRIRSNLDIRAL  
DSPRGLRTEVTSKMFQKTRTGSFHIRRGEVGIYQVQLRALEHVDGTHVCQLPEDQKGNHILKPSFSDGLKMDAGI  
ICDVCTCELQKEVRSARCSFNGDFVCGQCVCSEGWGQTCNCSTGSLSDIQPCLREGEDKPCSGRGECQCGHCVC  
YGEGRYEGQFCEYDNFQCPRTSGFLCNDRGRCMGGQCVCEPGWTGSPCDCPLSNATCIDSNGGICNRRGHCECGR  
CHCHQQSLYTDITICEINYSIAHPGLCEDLRSCVQCQAWGTGEKKGRTCEECNFVKMVDELKRAEEVVVRCSEFRD  
EDDDCTYSYTMEDGAPGNSTVLVHKKKDCPPGSFWLIPLLLLLLPLALLLLLCWKYCACCKACLALLPCCN  
RGHMVGFKEGDHYMLRENLMASDHLDTPMLRSGNLKGRDVVRWKVTNNMQRPGFATHAASINPTLVPGLSLRILA  
RLCTENLLKPDRTRECAQLRQEEVENLNEVYRQISGVHKLQQTFRQOPNAGKKQDHTIVDTVLMAPRSAPKALLK  
LTEKQVEQRAFHDLKVAPGYTTLTADQDARGMVEFQEGVELVDVRVPLFIRPEDDDEKQLLVEAIDVPAGTATLG  
RRLVNITIIKEQARDVVSFEQPEFSVSRGDQVARIPVIRRVLDGGKSQVSYRTQDGTAGNRDYPVEGELLFQP  
GEAWKELQVKLLELQEVDSLLRGRQVRRFHVQLSNPKFGAHLGQPHSTTIIIRDPDELDRSFTSQMLSSQPPPHG  
DLGAPQNPNAKAAGSRKIHFNWLPSPGKPMGYRVKYWIQGDSESEAHLLDSKVPVELTNLYPCDYEMKVCAYG  
AQGEGPYSSLVSCRTHQEVPSSEPGRLAFNVVSTVTQLSWAEPATNGEITAYEVCYGLVNDNRPIGPMKKVLV  
DNPKNRMLLIENLRESQPYRYTVKARNGAGWGPEREAIINLATQPKRPMIPIDIPIDVDAQSGEDYDSFLMYS  
DDVLRSPSGSQRPVSDDTGCGWKFEPLLGEELDLRRVTWRLPPELIPRLSASSGRSSDAEAPTAPRTTAARAGR  
AAAVPRSATPGPPGEHLVNGRMDFAFPGSTNSLHRMTTTSAAAYGTHLSPHVPHRVLSTSSTLTRDYNLSLTRSEH  
SHSTTLPRDYSTLTSVSSHDSRLTAGVPDTPTRLVFSALGPTSLRVSWQEPRCERPLQGYSVYQLLNGGELHRL  
NIPNPAQTSVVVEDLLPNHSYVFRVRAQSQEGWGREREGVITTESQVHPQSPCLPLPGSAFTLSTPSAPGPLVFT  
ALSPDSLQLSWERPRRPNGDIVGYLVTCEMAQGGGPATAFRVDGDSPESTRITVPGLSENVYPYKFKVQARTTEGFG  
PEREGITITTESQDGGPFPQLGSRAGLFQHPLOSEYSSITTTHTSATEPFLVDGLTLGAQHLEAGGSLTRHVTQEF  
VSRTLTSTGLSTHMDQQFFQT

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**FIGURE 4965A**

CAAGGGGCCAGGACCTGAGTTTTATTGGGCCTTGACTAATGTGCCTCCTCATCTGTGTCTCACCCTCATTGTG  
GACTTAGGTTTCAGGTATCTCAGAGGCAGACCCACAGGCTCTGCTCCAGGCCATGAAGGACCTGGACGGCATGGA  
TGCTGATATCTTAGGTCTGAAGAAATCTAATTCAGCCCCTAGCAAAAAAGCTGCAAAGGACCTGGGAAAGGAGA  
GCTGCCCAACCAACCCCAAGCCTGCAGGGGGTGCCATTCCCACCAAGAAGTCACTTCCGTCTCCAGCAGCTCTGG  
GCATCAGAACAGGAGGTTTTCTCTGAAGACTTGAAGACCCATTGAGAGGACTTCTCTCCTATGATGAAGGAGG  
AATCACCAAGCAGCCGCTGTGACACAGAGTAAAAAGCCTTGTGACAAGAGCCCCAGCACAGTGAGAGATCAAGG  
TCCCTCTATTCTCTAACTCCTGGGGACACCCCCATCCGAAAAAAGAAGAATTGTTGTTTGATGATGGGGATGA  
CATCATGGCCACCTTGGGGTTTGGAGACAGCCCCAAAGCAGAGAAGAGGCAGATAGGAGACCAGGAAGGGCCTCG  
CCCTGCTCGCTCAGCTGGATGAGCTGCTGGGTGAGGCATGGCCACCAAACTCCTGGCCCCCGGGGACCGG  
GGAGCACAGGGAGTTCAAGCTAGACAAGAAGTACCAGAGGCCACAGGACAGTGAAGATATGTGGGGTGACGAGGA  
CTTCACCTTTGGAGCCTATCAGCCCCACTGTGGTCTCCTCTGAGGGCCGGCAGTCCCGCCGGCAGTCTGTCACTAG  
GTTCTTCGACAGAGTGGCGCAGACCCCAAGGGAGAACCAGGCTCCAAACAGAGCCCTCCAATGGCTTCCAGCCC  
CATCCAGCCCAGGAAGGGAGGAGCTGACTGGTTGGGCTCAAGGACGAGGACTTGGACCTGTTCCCTGCCTCACC  
CACCAGAGAGGCCCATCGGGAAAGTTAGTGCCTGTACGCCCTCAGTGCCTCCTCCTGCGAGCCAGCACTCCAC  
GCCAGCTGGGCTGCCCCCCCTCCAGGGCAAAGCCACCAACTGAAGGTGCAGGGTCCCTGCCAAAGCCAGCCAGGC  
TTCCAAGCTGCGAGCCTCCAAGGAGGAGAAAGAGGACTGGCTGAGCCATGCCCTGTCTCGGAAGAAGTCCCAAGG  
CCTGGCCAGAGAGCAGCATGCTGGGACCTCTGAGGGCCTGCATTGGCGGGGACAGCGGGCCATCCCCCTTCTGG  
CAGCCTGACCTGGGCCCTTCTGTACCTTACCTTGAACGCTGCCTTTCTCAGCCAACCTCTCACCAGCACACAA  
GGGCTTGAGCACGCAGCTGCTGGAGGGAGTTCTGGAACAACGCACGAGAAAGACCGTGTGTAGGCCTGGTGTCT  
TCGGGGTCCCCTGTGACTCAGAACCATGCCGCTCAGCACTCCCTACAGGTTCCCCAAAGAGGGGAACAGCCCCT  
GGAGACCTCTCAGCCACTGAGCCTGCCACGTGTTTCCGAGCACCCAGAAACCCACAGAGCCTTCCGTGCCCGTC  
CAGCCCCTGCTCCCAGAGTCCCTGGCCCGAGCCTGCTGCCGAGCACAGAATACCAGAAGCAGCTCCTGGCAGCA  
CAGGTGCAACTTCAGTGCAGCCCCGCTGAGCTCCAGGCCGAGCTGCTGCATAGCCAGGCCCGGCTGGCAGAGCTG  
GAGGCCCAGGTGCGGAAGCTGGAGCTAGAACGGGCCAGCATGAGCTGCTGCTGGGGAGTCTGCAGCAGCAGCAC  
CAGGCAGACCTGGAGCTCATCGAGAGTGCACACAGAAGCCGCATCAAGGTGCTAGAAACATCGTACCAGCAACGG  
GAGGAGCGGCTCCGGAGAGAGAACGAAGAGCTGTGAGCTCGGTATCTGTGCGAGTGCCAGGAGGCCGAACAGGCC  
CGTGCTGAGCTTACGGCCAGCACAGCGCGCTTGGCGGCCATAGCGCAGGAGAAGGACCAGGAATGGAGCGG  
CTCCGGGAGCTGCAGCGGGCGTCCATCCTAGACATGCGCAGAGACCAGGAGCAGCTGCAGCGGCTAAAGCTG  
CTGAAGGACCGAGAGGTGATGCGGCCACAGTGCCACCTCCACACACGGTCCCTGAATAGCATCATCCACCAG  
ATGGAGAAGTTCTCCAGCAGCCTGCACGAGTTGTCTCCCGCTGGAGGCCTCGCACCTCACCACCTCCAGGAG  
CGGGAGCTGGGGATCCGGCAGCGTGACGAGCAGCTGCGGGGAGCGGCTGGGCCAGCAGCAGCGGGACATGGAGGA  
GGAGCGGAGCGGCAACAGGAGGTGATCGGGAAGATGGAGGCACGGCTGAATGAGCAGAGCCGGCTGCTGGAGCA  
GGAACGCTGGCGGGTACTGCCGAGCAGTCCAAGCGGAGTCCATGCAGCGCGCCCTAGAGGAGCAAAGGAAGGT  
CACGGCCCAGCAGATGGCCATGGAAGGGCGGAGCTGGAACGGGCCAAGAGCGCCTTGCTGGAGGAGCAGAAGTC  
TGTCATGCTCAAGTGCGGGGAGGAGCGGCGCGCCTGGCTGCCGAGTGGGCGGAGTTCTCCGCGCAGCAAAAGCT  
GAGAGCAGGCTGAGCTGAAGATCAGGGCCAGCGAGCTCCGGGCCGAGGAGAAGCAGCTGGCAGCGGAGAGAGCAG  
CCCTGGAGCAGGAGCGGCAGGAGCTGCGGCTGGAGAAGGAGAGGATCAACGCCACCGCCCTGCGTGTCAAGCTCC  
GCGCCGAGGAGGTGGAGAGCATGAGCAAGGTGCCCTCCGAGAAGTACGAGGAGGGGAGCGGGCATTGCGCGAGG  
CCCAGCAGGTGCAGGCAGAGCAGCAGGCCCGGTTGCAGGCGGTGCAGCAACAGCAGGAGCGGCTGCGGAAGCAGG  
AGCAGCACATGCACCAGGAGCATCTGAGTCTGGCCCAGCAGAGGCTGCAACTGGACCGCGCACAGCAGGACCTGC  
CCTCTAGCCTCGTGGGTCTGTTCCTCAGGGCCAGGGCCCTGCAGCCTCCAGCCAGAGTGCCTCATGCCTCCTG  
CTCCACCACCCGTTGGTGCAGCCAGCCGCCAACTGGCCTGGACCCAGCCCCTGCACCTCCATGCCAGGCTGG  
CACTGCTGAGGCACATGGCAGAGCAGCACCTGCGGTCTGCGGTGGCACCTGGCAGCTGGACCACAGCCAGGAGAA  
GGGTACTATTAGCCCTGCTTCAAACATGCAGAACTGAGGCCCGGGGAGATTAAATAACCTGCCTGAAATGACAC  
CGTCTGGGCCCGCGGACACCCCCCTGGGGCCGATGCCAACAGTGACATCGACTTGAGCAACCTGGAGCGGCT  
GGAGAAGTACCGGAGCTTCGACCGCTACCGGCGCGGAGCAGAGCAGGAGGCGCAGGCCCCGCACTGGTGGCGGAC  
CTACCGAGAGTATTTGGGGAGAAGACAGATCCCAAAGAGAAGATTGATATTGGGCTGCCTCCACCCAAAGTCTC  
CCGACCCAAACAGCTACTGGAACGGAAACAGGCCATCCAGGAGCTTCGGGCCAATGTGGAAGAGGAGCGGGCTGC

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**FIGURE 4965B**

CCGCCTCCGCACAGTGTCCCGCTGGATGCCGTGCGGGCCGAGTGGGAGAGGACCTGTGGCCCCCTACCACAAGCAG  
CGTCTGGCTGAGTATTACGGCCTCTACCGAGACCTGTTCCACGGTGCCACCTTTGTGCCCCGAGTCCCCCTGCAC  
GTGGCCTACGCTGTGGGTGAGGATGACCTGATGCCTGTGTACTGTGGCAATGAGGTGACTCCAACCGAGGCTGCC  
CAAGCGCCAGAGGTGACCTATGAGGCAGAAGAGGGCTCCTTGTGGACGTTGCTACTCACTAGCTTGGATGGGCAC  
CTGCTGGAGCCAGATGCTGAGTACCTCCACTGGCTGCTAACCAACATCCCGGGTAACCGGGTGGCTGAAGGACAG  
GTGACGTGTCCCTACCTCCCCCCTTCCCTGCCCCGAGGCTCCGGCATCCACCGTCTTGCTTCCCTGCTCTTCAAG  
CAGGACCAGCCGATTGACTTCTCTGAGGACGCACGCCCCCTCACCTGCTATCAGCTGGCCCAGCGGACCTTCCGC  
ACTTTTGATTCTACAAGAAACACCAAGAAACCATGACTCCAGCCGGCTTGTCTTCTTCCAGTGCCGCTGGGAT  
GACTCCGTCACCTACATCTTCCACCAGCTTCTGGACATGCGGGAGCCGGTGTTTGAGTTCGTGCGGCCGC

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**FIGURE 4966**

MAPKTKKGCKVTLPEKPVKLASHTRDTTGVSQMFPSSKARTKSLLGDDVFSTMAGLEEADAEVSGISEADPQALL  
QAMKDLDGMDADILGLKKSNSAPSKKAAKDPGKGELPNHHPKAGGAIPTKKSILPSPSSSGHQNRFFSSELEDPL  
RGLLSYDEGGITKQPPVTQSKTASDKSPSTVRDQGPSIPLTPGDTPIRKKEELLFDDGDDIMATLGFGDSPKAEK  
RQIGDQEGPRPARSTLDELLGRGMATKLLARPGTGEHREFKLDKKYQRPQDSEDMWGDEDFTFGAYQPTVVSSEG  
RQSRQSVSRFFADSGADPKGEPGSKQSPPMASSPIQPRKGGADWLGLKDEDLDLFPASPTREAHRESSVPVTPS  
VPPPASQHSTPAGLPPSRAKPPTGAGSPAKASQASKLRASKEEKEDWLSHALSRKKSQGLAREQHAGTSEGLHL  
AGTAGHPPSGSQPLTSTQGLEHAAAGGSSGTTARERPCVRPGVSGSPVTQNHAASALPTGSPKRGTAPGDLSTATE  
PATCFPSTQKPTEPSVPVQPLLPESLARSLLPSTEYQKQLLAAQVQLQCSPAELQAELLHSQARLAELEAQVRGS  
GAVGAGGRVATGGDTESGWKLPQEGGRAVGTGQRGVQPPPLPGCWPSCCLPGAEGARTGPA



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**FIGURE 4967**

CCCGAGCATCCCGCGCCGACGGGGCTGTGCCGGAGCAGCTGTGCAGAGCTGCAGGCGCGCGTCA**ATGG**CTGCTTTG  
AGACAGCCCCAGGTGCGGGAGCTGCTGGCCGAGGCCCGGCGAGCCTTCCGGGAGGAGTTCGGGGCCGAGCCCGAG  
CTGGCCGTGTGACGCGCCGGGCGCGTCAACCTCATCGGGGAACACACGGACTACAACCAGGGCCTGGTGCTGCCT  
ATGGCTCTGGAGCTCATGACGGTGCTGGTGGGCAGCCCCGCAAGGATGGGCTGGTGTCTCTCTCACCACCTCT  
GAGGGTGCCGATGAGCCCCAGCGGCTGCAGTTTCCACTGCCCCACAGCCCAGCGCTCGCTGGAGCCTGGGACTCCT  
CGGTGGGCCAACTATGTCAAGGGAGTGATTCACTACTACCCAGCTGCCCCCTCCCTGGCTTCAGTGCAGTGGTG  
GTCAGCTCAGTGCCCCGTTGGGGGTGGCCTGTCCAGCTCAGCATCCTTGGAAGTGGCCACGTACACCTTCCTCCAG  
CAGCTCTGTCCAGACTCGGGCACAATAGCTGCCCCGCGCCAGGTGTGTCAGCAGGCCGAGCACAGCTTCGCAGGG  
ATGCCCTGTGGCATCATGGACCAGTTCATCTCACTTATGGGACAGAAAGGCCACGCGCTGCTCATTGACTGCAGG  
TCCTTGAGACCAGCCTGGTGCCACTCTCGGACCCCAAGCTGGCCGTGCTCATCACCAACTCTAATGTCCGCCAC  
TCCCTGGCCTCCAGCGAGTACCCTGTGCGGCGGCGCCAATGTGAAGAAGTGGCCCGGGCGCTGGGCAAGGAAAGC  
CTCCGGGAGGTACAAGTGAAGAGCTAGAGGCTGCCAGGGACCTGGTGAGCAAAGAGGGCTTCCGGCGGGCCCGG  
CACGTGGTGGGGGAGATTGCGCGCACGGCCCAGGCAGCGGCCGCCCTGAGACGTGGCGACTACAGAGCCTTTGGC  
CGCCTCATGGTGGAGAGCCACCGCTCACTCAGAGACGACTATGAGGTGAGCTGCCCAGAGCTGGACCAGCTGGTG  
GAGGCTGCGCTTGCTGTGCCTGGGGTTTATGGCAGCCGCGATGACGGGCGGTGGCTTCGGTGGCTGCACGGTGACA  
CTGCTGGAGGCCTCCGCTGCTCCCCACGCCATGCGGCACATCCAGGAGCACTACGGCGGGACTGCCACCTTCTAC  
CTCTCTCAAGCAGCCGATGGAGCCAAGGTGCTGTGCTTGT**GAGG**CACCCCCAGGACAGCACACGGTGAGGGTGCG  
GGGCTGCAGGCCAGTCCCACGCTCTGTGCCGGTGCCATCTTCCATATCCGGGTGCTCAATAAACTTGTGCCT  
CCAATGTGGTA

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**FIGURE 4968**

MAALRQPQVAELLAEARRAFREFGAPELAVSAPGRVNLIGEHTDYNQGLVLPMALELMTVLVGSPRKDGLVSL  
LTTSEGADEPQRLQFPLPTAQRSLEPGTPRWANYVKGVIQYYPAAPLPGFSAVVVSSVPLGGGLSSSASLEVATY  
TFLQQLCPDSGTIAARAQVCQQAHSFAGMPCGIMDQFISLMGQKGHALLIDCRSLETSLVPLSDPKLAVLITNS  
NVRHSLASSEYPVRRRQCEEVARALGKESLREVQLEELEAARDLVSKEGFRRARHVVEIRRTAQAAAALRRGDY  
RAFGRLMVESHRLRDDYEVSCPELDQLVEAALAVPGVYGSMTGGGFGGCTVTLLEASAAPHAMRHIQEHYGGT  
ATFYLSQAADGAKVLCL

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**FIGURE 4969**

GGTCGTTTCGTTGGGCGGTGCTGGTTTTTCGCTCGTCGACTGCGGCTCTTCCTCGGGCAGCGGAAGCGGCGGGCG  
GTCGGAGAAGTGGCCTAAAACTTCGGCGTTGGGTGAAAGAAAATGGCCCCGAACCAAGCAGACTGCTCGTAAGTCC  
ACCGGTGGGAAAGCCCCCGCAAACAGCTGGCCACGAAAGCCGCCAGGAAAAGCGCTCCCTCTACCGGCGGGGTG  
AAGAAGCCTCATCGCTACAGGCCCGGGACCGTGGCGCTTCGAGAGATTTCGTCGTTATCAGAAGTCGACCGAGCTG  
CTCATCCGGAAGCTGCCCTTCAGAGGTTGGTGAGGGAGATCGCGCAGGATTTCAAAACCGACCTGAGGTTTCAG  
AGCGCAGCCATCGGTGCGCTGCAGGAGGCTAGCGAAGCGTACCTGGTGGGTCTGTTTGAAGATACCAACCTGTGT  
GCCATCCACGCTAAGAGAGTCACCATCATGCCCAAAGACATCCAGTTGGCTCGCCGGATACGGGGAGAGAGAGCT  
TAAGTGAAGGCAGTTTTTATGGCGTTTTGTAGTAAATTCTGTAAAATACTTTGGTTTAATTTGTGACTTTTTTTG  
TAAGAAATTGTTTATAATATGTTGCATTTGTACTTAAGTCATTCCATCTTTCAGTCAAGGATGAATGCGAAAAGTG  
ACTGTTACAGACCTCAGTGATGTGAGCACTGTTGCTCAGGAGTGACAAGTTGCTAATATGCAGAAGGGATGGGT  
GATACTTCTTGCTTCTCATGATGCAITGTTCTGTATGTTAATGACTTGTTGGGTAGCTATTAAGGTACTAGAGTT  
GATAAATGTGTACAGGGTCCTTTTGCAATAAAAAGTGGTTATGACTTGATCCAAGTGTTTAAACAATTGGGGCTGTT  
AAGTCTGACCATAACATCACTGTGATAGAATGTGGGCTTTTTCAAGGGTGAAGATACAAGTCTTAACCACAGTGTA  
ACTTACAGTTTCCTTTAAAAAAGTAAACCTGGCAGCTATAGAATACACTATGTGCATTTATAATAGCT  
ATTTTATATATTGTAGTATCAACATTTTTAAATTAATGTTTTACATTCACAAGTGGTGGGGAGTCTTGTCATTA  
AGGTGTGTGTAATTTAGAGTCCAGTTGGTTTTCTTCTGACTGCACTTGTTCTCATAGTAGTAAATGCTATGCGC  
ATTTATACCTTGATAAGTCCCTCATTCTACCACATGTTAACCTCTAGCTGATAATGCAAACACTAACTGGGGGA  
TTTTATTTATAAGGGCTCTAGAAAAACGAGTTATTCACACCAGCATCATCTTAACATACTCTGAAGTGTGTA  
GTGCAGCTTTTCATTGTGTGTGTGGTTGGTCTCATAACTAGGTTGAGTTTTTCTCCTCTGCTGAGGAAACAGTA  
CCGAAGTTCTTTTTCTTGTTGGCATTGTATTATAAAAACTTGGTGTGGGGGAGGAGCACAAAACCTCCAGCCACT  
GAACCTCTGCCAATTAAGATGGTGTGGGTTAGGTTACATCTGGTTACTGTCTGGGAAAATCATTTTTATAGAG  
ATGGCCTTCCAAGTGGTTTTAAATTTACTGAAGTTTTTAGGTCAATTATGTATGTTGACTAAATTTACAAATAA  
ACTTGTTTATCC

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**FIGURE 4970**

MARTKQTARKSTGGKAPRKQLATKAARKSAPSTGGVKKPHRYRPGTVALREIRRYQKSTELLIRKLPFQRLVREI  
AQDFKTDLRFSAAIGALQEASEAYLVGLFEDTNLCAIHAKRVTIMPKDIQLARRIRGERA

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## FIGURE 4971A

GAAGAGGCAGGAAGACAAGACCATGTTCGAAGGGCCCCGGGCCCCGGCGGCTCCGCAGCTTCCTCGGCGCCCCGGC  
CGCTACCGCTCAGGTGCTGCAGGCACAGCCCGAGAAACCGCAGCACTACACGTACCTGAAAGAATTCCGCACAGA  
GCAGTGCCCACTCTTTGTGCAACACAAATGCACGCAGCATCGGCCCTACACCTGCTTCCACTGGCACTTCGTGAA  
CCAGCGGCGCGCGCGGTCCATCCGCCGTGGGACGGCACCTTCAATTACAGCCCTGACGTCTACTGCACCAAGTA  
CGACGAGGCTACAGGCTCTGCCCGAGGGCGACGAGTGCCATTCTGCACAGAACCACAGGGGACACTGAGCG  
CAGGTACCACCTTCGTTACTACAAACTGGAATCTGCATCCACGAGACAGACTCGAAAGGCAACTGCACCAAAAA  
CGGCCTGCACTGCGCTTTTGGCCACGGGCCCCATGACCTCCGCTCCCTGTCTACGACATCAGGGAGCTTCAGGC  
CATGGAGGCCTTGCAAGATGGCCAGACCACGGTAGAGGGGAGCATAGAGGGCCAGTCGGCTGGGGCTGCGAGCCA  
TGCCATGATAGAAAAGATCCTCAGCGAGGAGCCTCGGTGGCAAGAGACTGCTTATGTGCTGGGGAACATAAGAC  
GGAGCCTTGCAAGAAGCCCCCGCGGTGTGCCGCCAAGGCTATGCCTGTCCCTACTACCACAACAGCAAGGACCG  
GCGGCGGAGCCCCCGGAAGCACAAATACAGGTCTGTCCATGTCCAAACGTCAAGCACGGGGATGAGTGGGGAGA  
CCCTGGCAAGTGTGAGAACGGAGACGCTGCCAGTACTGCCACACCCGCACCGAGCAGCAGTTCCACCCCGAGAT  
CTACAAGTCCACCAAGTGAACGACATGCAGCAGTCGGGCAGCTGTCCCCGAGGACCTTCTGCGCCTTTGCCCA  
CGTAGAACAGCCACCCCTGAGTGACGACCTGCAGCCTTCTCAGCTGTGTCCAGCCCCACCCAGCCAGGTCTGT  
CCTGTACATGCCATCTGCCGCCGAGACTCGGTGCCTGTGAGCCCTCCAGCCCGCATGCCCTGACCTCAGTGC  
CCTCCTCTGTAGAACAGCAGCCTAGGCAGCCCGTCTAACCTCTGCGGCTCCXCCACCGGGCTCCATCAGGAAGC  
CCCCAAACCTGGAGGGCATCGTCTTCCCTGGGGAGTCTGGCCTGGCCCTGGCAGCTATAAGAAGGCTCCCGCT  
TCGAGAGGGAAGACCAGGTGGGAGCCGAGTACCTGAAAAATTTCAATGCCAGGCCAAATTAACCCCACTCAT  
TAGAGCCCAGGAGTCAAGAGCAGCCTCTGCTTCAGCCCAAACAGGACATGCTGGGCATCTCCCCGCAGGCAGCC  
CCCTGACCTCAAGCATCTCTTCTAGTATCACCTCCAGCCTGGCAGCTACCCCCCTAGCCAGTGGGCACCAGCA  
GCGTCCCCGGCATGAATGCAAACGCTCTGCCCTTCTACCCACACAGCGACACGGTAGAGTCAGTCATAGAGTCTG  
CTTTGGATGACCTGGACCTGAATGAGTTTGGCGTGGCCGCCCTGGAGAAGACTTTGATAACAGCACAGTGGCCC  
ACCCAGGAAGCATCACCATCGGCGGCAGCTTGCTGCAGAGCTCTGCACCCGTGAACATCCCCGGCTCCTTGGGCA  
GCTCTGCCCTCCTTCCACTCAGCATCCCCGTCCCTCCGTCAGCCTCTCCTCGCATTTCTGCAGCAGCCCCAGG  
GCCACCTGAGTCAGTCGGAACACATTTTTGGGAACCTCAGCATCACATGGATCTTTGGGTCTGAACGGGATGA  
ACAGCAGCATCTGGGAGCATTTTGCCTCTGGAAGCTTCTCCCCGGGCCTTCCCCCGCTTCTCTATCAGGGCCAG  
GGGTGCCGAGCTGGCCCGACTTCGGCAAGAGCTGGATGAAGCCAACAGCACCATCAAGCAGTGGGAGGAGTCTCT  
GGAAGCAGGCCAAGCAGGCTTGTGATGCCTGGAAGAAAGAGGCGGAGGAGCTGGTGAGCGGGCCAGTGCAGCGG  
GCGCCGAGTGCAGCTGGCCCGGAGCAGCGGGATGCACTGGAGGTGCAGGTGAAGAAGCTCCAGGAGGAGCTGG  
AGCGGCTACACGCGGGGCTGAGCCCCAGGCCCTGCCCGCTTCTCCGACCTGGAGGCGCTCTCACTCTCCACCC  
TCTACTCCCTCCAGAAACAACCTGCGGGCCACCTGGAACAAGTGGACAAGGCCGTGTTCCACATGCAGTCGGTGA  
AATGCCTTAAGTGTGAGGAACAGAAGCGGGCAGTGCTGCCGTGCCAACACGCTGCGCTGTGTGAGCTCTGCGCTG  
AGGGCAGCGAGTGCCCCATCTGCCAGCTGGCCGGGCCCCACACCTCCAGTCGTGACCCTGCAGGCCTGGCCAG  
CCTGGCCAGATCTTCTACCTAGGACTTTTTAAAGTATATATATATATATGAATATATATATATATGTGTATGT  
ATGTATGTATATGTATATGATTATGTATATGTATACATTTCCGTATGTATGTATATGTATACATTTCCGTATGTG  
TGCAGGTATGCGTGGTGGTGTGGACAGTGTCTGTGTGTATATCTGTACATAGATATAGACACACACTTTAAAGA  
CTTACCAAGCACTTTTTAAAGAAGAAACTATTTTGCAGTCTCTCCCTACCCACTCCCTGCCCTTCCCACTGCAG  
AGATGACATCCCTCTTCTCCCACTGGCCTTTTGGCAGAGAATCTGGTTCGTCTCTTTTTTAATGTAGGAACATA  
ACTATTTTTAACTTCTTCTCGGGGCTGAGCAGGGAAGGGTGGGACTGGAAGGCACTAAGGGGAAGGGAGAAGCC  
CTCAGGGCAGGCCCTGCTCCCCCTACCTCCTTGCCAGGGCAAGGGTGGAGTGTGGAAGACGTGGGTCCCCCAGAG  
CAGGCCTGGCCCCCAGCTXGXTGAGGGCCTCAGGGAGGCCCCAGGGGGAGTGTGGGGGTCTCAGCTGGCTTAGC  
TCCTAAGTTTACCAATGTAAATTTAGTCTTGGGGAGAACAGCAAGGGCTGGAGGCCAGTGTGCAGGGCCAGCC  
CCACTCCTGACACCTGGGCCCTTGAAGCTCCTTGAGGGGCAAGGCCAGGAGTTCAGCCCTCAGGTTCTCTGAGG  
GTCCACCTCAGTCTTCCCCCGCGGCCCTCCCCGGACTCCCCACAAGAGCCTCCCTGGCCCCAGGGCCGCT  
ACCAGGCTGGTACTCATTCTATGACCACCGCCCCCAACCAGCTGCCCCCAGCTCTCCCTGCCCCCTCCCCCTCT  
GGCAGCTAGCAGGGCAATTGGCGGGGAGGAGTGGGACTGAGGACTGAGGACCAAGGGGGCCAGGCCCTGCCCT  
CCTACCCGGAGGGGCTCCGTTTGCAATTCCTTGGTGTCTCTGAGTGCAGCTGGTGTCCCGCCTGTTCTGGGCGG  
ACGCCTGTGTGCGTGTGTGTGTCCTGTCCAGTGTATATTGTGTCTTAGCTTCCATTTAAAAATTTGTCTGTAC

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**FIGURE 4971B**

AGAGAGAGATGCAGCAGGGGCGGGAGGGCAGAGTGGGCGGAGGGGAGCAGCCGCACCCCCAGCACCGGGTGTCTG  
CGGTAGGAACAAGAGGGGCTGAGAGGGTCTGGTCCTGGCCCAGGCTCCCCCTGGGCTCAGCACGAAAGGGCTTTC  
AATGAATTAAGTGAAAACTTTTCTTTTTTACAAAAATGCAAAAATCAACAAAGCTCCAAACCTATTGGAAATA  
AAATATGAACTTGC

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**FIGURE 4972**

MSKGP GPGGSAASSAPPAATAQVLQAQPEKPQHYYTYLKEFRTEQCPLFVQHKCTQHRPYTCFHWHFVNQRRRSI  
RRRDGTFNYS PDVYCTKYDEATGLCPEGDECPFLHRTTGD TERRYHLRYYKTGICIHETDSKGNCTKNGLHCAFA  
HGPHDLRSPVYDIRELQAMEALQNGQTTVEGSIEGQSAGAASHAMIEKILSEEPRWQETAYVLGNYKTEPCKKPP  
RLCRQGYACFYHNSKDRRRSPRKHKYRSSPCPNVKHGDEWGDPGKCENGDACQYCHTRTEQQFHPEIYKSTKCN  
DMQQSGSCPRGFFCAFAHVEQPPLSDDLQPSAVSSPTQPGPVLYMP SAAGDSVPVSPSSPHAPDLSALLCRNSS  
LGSPSNLCGSXTGLHQEAPKPGGHRLPWGVWPGPWQL

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**FIGURE 4973**

TGCGTTTTGAGTCTCGGGACCCCTGTTGGAGAGACTATGGCGCTCAACAAGAATCACTCGGAGGGCGGCGGAGTG  
ATCGTCAATAACACCGAGAGCATCCTAATGTCCATGATCACGTGGAATCACAATTCAATGACATGAAGAACGTG  
CCAGAAGCCTTCAAAGGGACCAAGAAAGGCACTGTCTACCTTACCCCTTACCGGGTCATCTTTCTGTCCAAGGGC  
AAGGATGCCATGCAGTCCCTTCATGATGCCATTTTATCTCATGAAAGACTGTGAGATCAAGCAGCCGTATTTGGT  
GCAAACTACATCAAGGGAACAGTGAAGGCGGAAGCGGGAGGTGGCTGGGAAGGCTCTGCTTCCCTACAAGTTGACT  
TTCACGCGAGGGGGCGCCATTGAGTTCCGACAGCGGATGCTCCAGGTGGCATCTCAAGCCTCCAGAGGTGAAGTC  
CCCAGTGGAGCCTATGGCTACTCTTACATGCCCCAGCGGGGCTATGTCTATCCCCCGCCAGTCGCCAATGGAATG  
TACCCCTGCCCTCCTGGCTACCCCTATCCACCGCCCCACCTGAGTTCTATCCAGGACCCCCCATGATGGACGGG  
GCCATGGGATACGTGCAGCCCCACCACCGCCCTACCTGGGCCCATGGAACCTCCGGTCAGCGGCCCCGATGTC  
CCCTCCACTCCTGCAGCCGAAGCCAAGGCCGAGAAGCAGCCGCCAGCGCCTATTACAACCCAGGCAATCCTCAC  
AACGTCTACATGCCACGAGCCAGCCGCGCCACCTCCCTACTACCCACCGGAAGATAAGAAGACCCAGTAGGCC  
CTCCTGCCTCCCTGCCTCCCAACCCTCATCTCTTACCTACCCCTCCCATCGGGGCTGTGCTGGGGCTTGGGGAG  
GGGAGGGGGCGCCTTGTCTCCCTCCAGGTCTGATCATAAACAATTACCAGGAAGTAGCATTGTGGGACATTAGG  
GCCCCCGCCTCGGGAGAGGTGCCGCCCAGCTTCCCATGCCAGCCCGGAGCCACAGTGCTGCCCAGCGTACCTC  
CCTCACCGTCTGGGGCTCTTCTGGGAGCACGGAGCATCCCCTGTTCTGTTTCACTCTCAGCTTCTCCCCTCGAA  
GGGACTCTCTGGCCACCTCCTCCACCGCAGTCCAGCTCCCTCAGTCTGGCACCCACTGCTACACTCAGCCTCATG  
AGCCACTTCAGACCAGCCAGAAGGAGCTTCCCTGACTGGAACCAGAGAATGCATGTCTGTCCACTTGGTGGCTGCT  
GGGTGGGGCCGGAACAAGGGCCCTGACCCTGTGTGCTGGCCGGGACCTGCCACCAGCCCCCAGCCTGCTTCT  
TCCCCTTAAGCTTTGTGCCCTGGATGCGCTAACATTCACTCTTGTGTTGTCCTGGACTGGCCATGAAGTGAGGA  
GATGGTTATTTAAAGAGAATTCCCTATTTATTTGACAAAAATCCAGTTAATATATTAATGTGAAATAAACCCCTG  
TTTGACCTCG



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**FIGURE 4974**

MALNKNHSEGGGVIVNNTESILMSYDHVELTFNDMKNVPEAFKGTKKGTVYLTPYRVIFLSKGKDAMQSFMMPFY  
LMKDCEIKQPVFGANYIKGTVKAEAGGGWEGSASYKLFTAGGAIEFGQRMQLQVASQASRGEVPSGAYGYSYMP  
GAYVYPPPVANGMYPCPPGYPPPPPEFYPGPPMMDGAMGYVQPPPPYPGPMEPPVSGPDVPSTPAAEAKAAE  
AAASAYYNPGNPHNVMPSTSQPPPPYYPPEDKKTQ

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**FIGURE 4975**

GGTGCGCAAGGGCACGGACCTCGGAGCTCTCCCCGTTCCCCCGCCGGCCATGAACGCCGCTCGCACCGGCTACCG  
AGTCTTCTCGCCAACCTCCACGGCCGCCTGCACGGAGCTGGCCAAAGCGCATCACAGAGCGCCTTGGTGCTGAATT  
GGGGAAGTCTGTTGTATATCAAGAGACCAATGGAGAAAACAAGAGTTGAAATAAAAGAAATTTGTTCTGGGCAAGA  
TATTTTCATTATACAGACAATACCCAGAGATGTGAATACAGCTGTGATGGAGTTGCTCATCATGGCTTACGCACT  
GAAGACTGCCTGTGCCAGGAACATTATTGGGGTCATCCCCTACTTCCCCTACAGCAAGCAGAGCAAGATGAGGAA  
GAGGGGTTCCATTGTGTGCAAGCTGCTAGCATCCATGCTGGCGAAAGCAGGTTTAACTCACATTATCACTATGGA  
TCITTCATCAAAAGGAAATACAAGGCTTTTTTCAGCTTTTCTGTGGACAACCTTAGAGCCTCACCTTTCTGCTTCA  
GTATATCCAGGAAGAAATTCCAAATTACAGAAATGCAGTCATTGTAGCTAAGTCTCCTGATGCTGCAAGAGGGC  
CCAGTCTTATGCGGAGAGACTGCGTCTGGGTTTGGCCGTCATTACGGGGAAGCTCAGTGCACGGAAGTGGACAT  
GGACGATGGTCTGCTCACTCCCCGCCTATGGTCAAAAAATGCTACTGTGCACCCAGGCCCTGGAGTTGCCATTGATGAT  
GGCCAAAGAGAAGCCACCGATAACTGTAGTTGGAGATGTTGGAGGCCGCATCGCAATCATCGTGGATGACATTAT  
TGACGATGTGGAGAGTTTTTGTGCTGCCGCGGAGATCCTGAAAGAGAGAGGCGCCTATAAGATCTATGTTATGGC  
CACCCACGGCATCCTGTCTGCAGAGGCCCTCGCCTGATTGAGGAGTCTCCGTAGACGAGGTGGTGGTGACGAA  
TACTGTCCCTCATGAGGTTTCAAGCTGCAATGTCCCAAGATAAAGACTGTGGATATCAGTTTGATTCTTTCTGA  
AGCCATTCCGAGAATCCACAATGGAGAGTCCATGGCCTACCTTTTCCGAAACATCACTGTGGATGACTAGCTTTTC  
ACGAGGGTCTCGACCCTGGACCTCCTGAGGGAACATGGAAAAAGCAGTGCCATGAGTGATACAGTGTTCCTTG  
CAAGGGAGGACTCGAAACAGCCTGGAGTTAGATATCTTCTTTTGGCCGGATTGATGGGGAGGAGGGATTAAAGA  
GTCAGGAAGAAGACAGAGCTAATGGATAAATATCATAACATGGCCTTACATGTCTGCTGTCTCATCAGCCCTGTTCC  
TTAAAGTTCTAGCTGCTTTCTTAAAAATAATCTGAAAATCTTATTGATACTAAAGAGGAGTTAAAGGCACATAA  
AGTCTTAACTCTATAATGTTCAATTTAGTTGTTTCAGCTCCAGGGAAATGGAGGTATTGATGTTGAACCTGGTTAG  
GGAAGCTGAGCGCCTGTGGCCCTATTACTATCCAGTTGGCCTCTCCCAAATCAACTCAAGTCTTTTATAGAGAA  
TCGTATTTTTCTTTTCAAGAAATGCTATGCCTACAGCCATTGAAAAATGAAGCATTCAATGTTGTTACATCTTCCAA  
GGATGTCAGATTAGAAAATAGCATCCCACCTCTGGGTATCTGAGTGGCTCTGAAGTTGCAATAAAATAATTTGT  
TGT

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**FIGURE 4976**

MNAARTGYRVFLANSTAACTELAKRITERLGAE LGKSVVYQETNGETRVEIKEFVRGQDIFIIQTIPRDVNTAVM  
ELLIMAYALKTACARNIIGVIPYFPYSKQSKMRKRSIVCKLLASMLAKAGLTHIITMDLHQKEIQGFFSFPVDN  
LRASPFLQYIQEEIPNYRNAVIVAKSPDAAKRAQSYAERLRLGLAVIHGEAQCTELDMDDGRHSPPMVKNATVH  
PGLELPLMMAKEKPPITVVGDVGGRIAIIVDDIIDDVESFVAAAEILKERGAYKIYVMATHGILSAEAPRLIEES  
SVDEVVVTNTVPHEVQKLQCPKIKTVDISLILSEAIRRIHNGESMAYLFRNITVDD

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**FIGURE 4977A**

CGCCTCCCCGCGCCTCGTTGCGCGCCGCTGTGCGCGCCGCGCCCGGAGACTCGCGCAGAGCAGTTATGGCGGATC  
CCGCAGCCCCACGCCCCGAGCTCCCGCTCCAGCCCAGGCCCGGCTCCAGCCCCGAGGAGTCCCGGCCCCAG  
CCGCAGCCCCCGTCCCGGCGCGCGCGCCGCTCGGACTCGGCCTCCGGGCGGTCTCTCGGACTCCGGCCAGAAG  
CCGGCTCGCAGCGCTGCTGTTTTCTCACGACCTGGTGTGCGGGCGTTACCGTGGCTCCGTGCACTTCGGGCTGG  
TGCGCCTCATCCACGCGAGGACTCGGACTCGGAGGGCGAGGAGGAGGGCCGCGGGAGCTCGGGGTGCTCCGAGG  
CCGGGGGCGCGGGCCACGAGGAGGGCCGGGCCAGCCCCCTGCGCGCGGCTACGTGCGCGTCCAGTGGTACCCGG  
AGGGCGTCAAGCAGCATGTGAAGGAGACCAAGCTGAAACTAGAGGACCGTTCTGTGGTGCCCCGAGATGTGGTCC  
GGCAGATGCGATCCACCGACAGTCAGTGTGGCAGGTGATCGACGTCAACATCGACTGTGCCGTCAAGCTCATCG  
GCACCAACTGCATCATCTATCCCGTCAACAGCAAGGACCTGCAGCACATCTGGCCCTTCATGTATGGGGACTACA  
TTGCCTATGACTGTGCTGGTGGGAAGGTCTACGACTTGAAGAACCAGATCATCTGAAGCTATCCAACGGCGCCA  
GGTGCTCCATGAACACGGAAGATGGCGCCAAGCTCTACGACGTCTGCCCGCACGTGAGCGACTCGGGTCTCTTCT  
TCGATGATTCTATGGCTTCTACCCAGGCCAGGTGCTCATTGGCCCTGCCAAGATCTTCTCCAGCGTCCAGTGGC  
TGTCAGGTGTCAAGCCCGTGTCTAGCACCAAGAGCAAGTTCGAGTGGTGGTGAAGAGGTGCAGGTGTAGAGT  
TGAAAGTTACATGGATTACCAAGAGTTTCTGTCCAGGGGGCACGGACAGCGTCAGCCCCCACCCTCTGTATCA  
CCCAGGAAAACCTAGGCAGGGTGAAGCGTCTCGGATGCTTTGACCATGCTCAGCGGCAGCTTGGGGAGCGCTGTC  
TGTATGTCTTCCAGCCAAGGTAGAGCCAGCCAAGATTGCCTGGGAATGTCCAGAAAAAACTGCGCCCAGGGGG  
AGGGCTCTATGGCCAAGAGGTGAAGCGCTGTTGAAGAAGCAGGTGTGCGGATCATGTATGTCTCCAGACA  
CCCAGTGTTCGGGACCATTCATGGAAGACCCAGACAAGAAGGGGGAATCCAAAACCAAGAGCGAAGCGGAGT  
CTGCCAGCCCTGAGGAGACGCCCCGATGCTCTGCCAGTCCAGTGGAGATGCAGGACGAGGGTGCAGAGGAGCCCCA  
CGAGGCAGGAGAGCAGCTGCCCCCATTCTGCTAAAAGAAGGCAGAGATGACAGGCTGCACTCGGCAGAGCAGGA  
CGCAGATGATGAGGCTGCTGATGACACGGACGACACCAGTTCGGTGACCTCCTCTGCCAGCTCCACCCTTCCTC  
CCAGAGCGGCAGCGGCACGAGTCGCAAAAAGAGCATCCCTTGTCCATCAAGAACTTAAAGCGCAACACAAAGAG  
GAAGAAGAATAAAATCACTCGAGACTTCAAGCCAGGGGACAGGGTGGCAGTGGAGGTGGTGACCACGATGACCTC  
AGCCGACGTGATGTGGCAGGATGGCTCCGTGGAATGCAACATCCGCTCCAACGACCTCTTCCCTGGCACCACCTG  
ACAACAACGAGTTCTGCCCTGGAGACTTCTGTGGTAGATAAGCGAGTCCAGAGCTGTCCAGACCCTGCTGTCTACG  
GTGTGGTACAGTCTGGGGACCACATCGGCCGTACCTGCATGGTGAAGTGGTTCAAGCTGAGGCCGAGTGGGGACG  
ACGTGGAGCTGATTGGAGAAGAGGAAGATGTGAGTGTTTACGACATTGCTGACCACCCTGACTTTAGGTTCCGTA  
CAACTGACATCGTCATCCGCATCGGCAATACTGAGGATGGGGCTCCTCACAAGGAGGATGAGCAGCCATCGGTGG  
GCCAGGTGGCCCGTGTGGACGTGACGAGCAAGGTGGAGGTGGTGTGGGCTGACAACTCAAAGACCATCATCCTGC  
CCCAGCACTTGTACAACATAGAGTCTGAGATTGAGGAGTCAGACTACGATTCCGGTAGAAGGCAGCACCAGCGGGC  
ATCCTCGGATGAATGGGAAGATGATAGTGACAGCTGGGAGACGGACAATGGGCTGGTGGAGGACGAGCACCCCAA  
GATAGAGGAGCCCCCATCCACCCCTGGAGCAGCCGCTGGCCCTGAGGACAAGGGAGTGGTGATCAGTGAAGAG  
GCAGCCACAGCCGTAXCXTAGGGGGCTGTGGCCATGGCTGCCCCCATGGCCGGGCTGATGGAGAAGGCTGGCAA  
GGACGGGCCACCCAAGAGCTTCCGGGAGTTGAAAGAGGCCATCAAGATCCTGGAGAGCCTCAAGAACATGACTGT  
GGAGCAGCTGCTGACGGGCTCGCCACCTCTCCGACTGTGGAGCCTGAGAAGCCAACTCGGGAGAAGAAGTTTCT  
GGATGACATCAAGAAGCTACAGGAAAACCTCAAGAAGACCCTGGACAATGTGGCCATTGTAGAGGAGGAGAAGAT  
GGAAGCAGTGCCCGACGTAGAGCGCAAGGAGGACAAGCCCGAGGGCGAGTCACCTGTGAAGGCTGAGTGGCCAG  
CGAAACCCCGGTGCTGTGCCAGCAGTGTGGCGGCAAGCTGGCGTCACCTTACCAGCGCCAAGGGCGAGGTCTTC  
TCCGTACTGGAGTTTGACCCCTCAAATCATTCTTTTAAAGAAATTGAGTTCCAGCCTCCAGAAGCCAAGAAGTTC  
TTCAGCACAGTGCAGGAAGGAGATGGCGCTGCTGGCTACCTCACTGCCTGAGGGCATCATGGTCAAGACTTTTGAA  
GATAGAATGGACCTCTTCTCAGCTCTCATCAAGGGCCCCACTCGAACCCCTACGAGGATGGCCTCTACTTGT  
GACATCCAGCTCCCCAACATCTACCCAGCCGTGCCCCCCTTCTGCTACCTCTCCCAATGCAGTGGCCGCTG  
AACCCCAACCTGTATGACAATGGGAAGGTGTGTGTCAGCCTCCTGGGCACCTGGATTGGAAAGGGGACAGAGAG  
TGGACAAGCAAGTCCAGCCTTCTCCAGGTGCTCATCTCCATCCAAGGTCTGATCCTGGTAAATGAACCATACTAC  
AACGAAGCCGGCTTCGACAGTGACCGAGGCCTGCAGGAAGGCTATGAAAACAGTCGCTGTTACAATGAGATGGCG  
CTGATCCGCGTGGTGCAGTCCATGACCCAGCTGGTGCGGCGGGCCCCCGAGGACTTTGAGCAGGAGATCAGGCAA  
CACTTTAGCACTGGTGGCTGGCGGCTGGTGAACCGTATCGAGTCCCTGGCTGGAAACCCATGCCCTGTGGAGAAG  
GCCCAGGCACTGCCCAACGGGTGCCCAAGGCCAGCAGCTCGCCAGACGCCCCAGCTGTAGCCGAGCTGTCAGAC

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**FIGURE 4977B**

TCCGGCCAACAAGAACCCTGAGGATGGAGGGCCAGCCCCAGGAGAGGCCTCCCAGGGCTCAGACTCAGAGGGCGGT  
GCCAGGGCCTGGCCTCAGCTAGCAGGGACCACACAGACCAGACTTCGGAGACCGCACCAGACGCATCGGTGCCAC  
CCAGTGTGAAACCAAGAAGCGGAGAAAGAGCTACCGGAGCTTCTTACCTGAGAAGAGTGGCTACCCTGACATCG  
GCTTCCCCCTCTTCCCACTTTCCAAGGGTTTCATCAAGAGCATCCGGGGTGTCTGACGCAGTTCCGGGCTGCCCT  
GCTAGAGGCAGGCATGCGGXAGTGCACAGAGGACAAGTAGCTGCCAGGCACAGAGGAAAGAGCATCACCGTGGGA  
GAGGCCAGCCGCCCTGCTCACTCCCCCGGAATCACCCCTCTTCCCATGCCCTCTGTCCCCACTGCAAACC  
CACTGCCCTCTTCTCCCAAGGTGAGTTTGATGCTGAAGTGCAAGAAGTGTGTGAGATGCTGCCGTTTCTATT  
TGAAGCGAGCTTTCAACAGGCGGGTCCCTGTGGCAAAGAAAATCGGAACCTGTTGCCGATTTTCCATTGTCA  
CCCCAGCAGAATGTCCGGCACTTGCTCCCTTGCTGCCCTTCTCAGGTCAGAGGCGGGTGTTCAGGGCCTGCCG  
CGGGCTCTCTGGGCCGGTTCCCTGCAGACCCGCAGACGAGCACATGTGCCTTGCATGAAGTGTGGGTGCGCCA  
ACAATTTCCCTGGTCCCTTTCAACCTGTTTAGTTCAACTCAAGCCTCCCTGTGTCCAGACCCCTCTGCTGCCAC  
CACCACCCAGGTCCCTCCCTAGTCCTCCAGCGTCAACACTATCCCTTGGGGAGTTGTAGCTGCTGTCACTGACTCC  
CGGCTATACATGGCCTGTGACACGTTATAGCCCTCAGGCCTGTTGAACTTGCTCTCTAAGAGAGGTTGGGACC  
AGGCTAGGTTCCGGGTGACGCCCAGGAGAGGTGGTGGCCTTCACACATGCACATGGAGTTGAGGACCAGGGAGCT  
GCAGGGAAAGCAACAGCTATAGGTGCCTTGCTCTTCTGTGCGGAGGCTGCTGGGGGCAAGAGCAGCTGCACAAGGC  
CAGGGCAAGTGCTAGGGCCCCCTCCCCATCACATGGTCACACTGGGACAGGCGTGCAGCTCACTGAACTCCAAGC  
GAGCCAGCCCTCTCTTGGACTAGAAGGCCTACTGTCAGCCCTTCGCTTACAACTGCAGGCTCAATCCGAAGGGG  
ACGGCCGGCGGGGGCTCTCCTAGTGCCCAGAGACAGGCCAGAGGTTTACAAGTTTTCTAAGCTTTTGATAATGT  
GAAGCTCCAGGCCGAGAGGATGCTGTTGAGCACATTGCAGCTATGTAATTTTGGTGTATGTATGTAATATTTAA  
GGTTGGAAAAAACTCAAAAGCAAAGATATTAACCTCTTATTAGAAAAAAGACAAAAAAAGCCAAAGCATGA  
TGCGTCTTGTGAGCCTTAAGTGGGCTCCACACCTGTGCTGTGCTGTGACCGCCAGCCAGCAGAGCTGCGGGAGG  
ATGGAGCCGGACCACACACCGTGGCATTGGAACCGAGTCGGTATCTTGTGTTGAGAAACACCCGGAGTACTGGT  
GGGGCTGTGCTTCCAGTGCATTGTACATGTGGAGATGTGAATGCCTACTGCTTACGATATCTGTATAAAGTGCT  
GTGTGATTAACTTTTTTTTACTTGC

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**FIGURE 4978**

CAGGACGCACATGCAGAACATCAAGGACATTTGGGTGACGCTCTCCTTCGTGGTGTACCTTGTGAAGCGCCTCAA  
CGAGGGCAGCAGCGCCATGGCCAACGGCATGGAGGAGAAGGAGCCAGAAGCCCCGGAGATGTAGACGCCACCCTG  
CCCACCCCCGGGATCCTGCCCCCAAGTCATTTCCGTCCCCCCCCAGGCCCTCCCACCACCCCATTTTATTTATA  
TGATTTTCTCCATTTGTCAICGTTCCCCACCCCTTCGACATGCTGCCAGGAAACAAGGGAAGGGGCCTCCCTCCG  
AGTGAGTCAGTGATGAGGCCGCGGCTCCCCGAGGTTGTGGGGAGGCTGCACTGGAGCCACAGGCAGGGGTGAGA  
GCACCCACTGAATTGACATGACCTCTGTCCCCAGGCCTGGCTCCCCGAGGGCTCAGAAGAGCAGCTTCGGTGTG  
CAGATCATCCGTCTGTGTGGGGTTCTCAGTGCCGAGGCCTTGGGGTGGGGGCCAGGCCCTCGCACTTGCAGAGGA  
GCCCAGTGGGCTGCACGCTCCCCCTCCATCCCCATCGGCCCTGTCCCCTGGAGTGTGTGAGAGCCCAGGGGAGAAT  
GCAGCCCACCAGGAGCACCTGGACCCCCCTGCCCGCCACATGGTGTGGCCATCACTCAGCCCCCTACCCCTGCCCTG  
CTCCTAAGGGTAGAAAACCTCCAGGGTCCCCTGCCACCGACTGCCCAGCCACTCCAAGCCCCCTGGCAGCTGCCCC  
TCCTGGAGCAGAAAAGTGCCTTTATCTCAGCCATCCGCAGACTGCTTGGCCAGATGCGGGGACAGGCTGGAATGAG  
GGAGGCGTCTTCATCTCCCTGCCATCCCCCTCTCAGGCCACCCCCGCCCCCCACCGGGCTGCAGGTGCTGCTGATG  
CGCTGGGATCTGATTGAGGATAAAAAAGGAAGGAGAGATGACCCCTACCCCTCATCCCCAGTTTTGAAAAGGTC  
TAAGCAAGTGAGTCTGGTGGAGGAGCTGAGGGAGGGAGCCATGGAAGGTGCCAGAAGGAAGGTTGGCGGGGGCAC  
GTGTGGGCGTGGCTTGGGCTGGTCAGAGTGGCGTGAGCTGCCCGGCGCTGCCCTGCCCAAGTGACCAGGGAAG  
TGTGTGTGTGTCATGTGTATGCGTGTCCGTCTGTCTGTCTAGTGTCTGGGTTTGGCCCAAGACTGGGCTGTAGT  
TACATTAATGCCCAGCCAGCCACCCCTGCCACTCACCTTCCTGGCCCAGGCCTTGCTGACTCTCTGAGCTGGGG  
AGGTGGGAGGCCAGGCGAGCCTGACTCTGTTGATCTACCCGTGCCCTGGGCCCCCTCCCCTCAGAGCCCATGTTAAC  
GAACCCCTAGAAAAGGAGAGAAACGGGCGTCAGGGGTGCACAGTCCACAGCTGAAGAGCAAGGTTTCGTGGCAGCAC  
GGCCCGGCCCCCTCACCTCTGTCCCCACGAGGGGACCCATGGGGGCTGTCTTTCAGGGCACAGATGACCAAAGT  
CCCTTCCTGCTTCCTGTTACCTGTCTTGCTCCTGGGGAGAAAGAGGGGCTGATGAGACTCCACTCAGGTGCACA  
CATCACCAGGTGCATCTGCAGGCACCGGGCTGGCTGCTGCAGCCAGGAGAAGGTGAGCGAGAAGGAGTGTATGA  
GTGTGAGTGTGTGTGATGGAAGTTGGGGCACTGGGCGTCTGACTCCCTCCCCACCCAAGAGAGGAAGGACCCCT  
CACCACCCCCACTGGTGAGACAGTTTACTTTGCCAACTGCCATGTTTTTGCCAAAACCAAGATTTTGAAGGAAA  
TGAGTGGCCAGCGCCAGGGCCAGGCCATGTGGCCTGCCAGCCTCAATGTCACTTGGTGGCGGGGTGGGGTGGG  
GGTGGGCAGCAGCATCCCAGCCTTGAGATGCTTCACTTTCCTTCTCTGTACCAGACTTTGAAAAATTGTTCTGT  
TCATCAGGCTCTGTTCTCAATGGCCTTTTGCTACGTGCCTCCCGAGAAATTTGTCTTTTTGTATAAATGACAAA  
GTGTTGAAAATGTATTTCTGAAATAAATGTTTCAAATGCAGAAACCC

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**FIGURE 4979**

MGSFRTSSALKRSFEVEEVETPNSTPPRRVQTPLLRATVASSTQKFQDLGVKNSEPSARHVDSLSQRSPKASLR  
VELSGPKAAEPVSRTELSIDISSKQVENAGAIGPSRFGKRAEVLGHKTPEPAPRTEITIVKPQESAHRMEP  
PASKVPEVPTAPATDAAPKRVEIQMPKPAEAPTAPSPAQTLENSEPAPVSQLSRLEPKPQPPVAEATPRSQEAT  
EAAPSCVGMADTPRDAGLKQAPASRNEKAPVDFGYVGIDSILEQMRRKAMKQGFEFNIMVVGQSLGKSTLINT  
LFKSKISRKSVQPTSEERIPKTIEIKSITHDIEEKGVRMKLTVIDTPGFGDHINNENCWQPIMKFINDQYEKYLQ  
EEVNINRKKRIPDIRVHCCLYFIPATGHSLRPLDIEFMKRLSKVVNIVPVIKADTLTLEERVHFKQRITADLLS  
NGIDVYPQKEFDEDEDRLVNEKFREMIPFAVVGSDHEYQVNGKRILGRKTKWGTIEVENTHCEFAYLRDLLIR  
THMQNIKDITSSIHFEAYRVKRLNEGSSAMANGVEEKEPEAPEM

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**FIGURE 4980**

CAGATGTAGTTTTTTCCGCACGTGCACGCCTTCCCTCCTCCCCGCCCTCAGGGTCCACGGCCACCATGGCATATT  
AGGGGCAGCAGTGCCTGCGGCAGCATTGGCCTTTGCAGCGGCGGCAGCAGCACCAGGCTCTGCAGCGGCACCCCC  
CAGCGGCTTAAGCCATGGCGCTTCCCACGGCATTGAGCAGCAGCATTGCTGTAAACCGACAAAGACACCTTCGAAT  
TAAGCACATTACTCGATTCCAGCAAAGCACCGCAACATGACCGAAATGAGCTTCTTGAGCAACGAGGTGTTGGTG  
GGGGACTTGATGTCCCCCTTCGACCAGTCGGGTTTGGGGGCTGAAGAAAGCATAGGTCTCTTAGATGACTACGTG  
GAGGTGGCCAAGCACTTCAAACCTCATGGGTTCTCCAGCGACAAGGCTAAGGCGGGCTCCTCCGAATGGCTGACT  
GTGGATGGGTTGGTCAGTCCCTCCAACAACAGCAAGGAGGATGCCTTCTCTGGGACACATTGGATGTTGGAGAAA  
ATGGATTTGAAGGAGTTCGACTTTGGTGCCCTGTTGGGTATAGATGACCTGGAAACCATGCCAGATGACCTTTTG  
ACCACGTTGGATGACACTTGTAACTCTTTGCCCCCTAGTCCAGGAGACTAATAAGGTGCCCCCCCAGATGGTG  
AACCCAATTGGCCATCTCCAGAAAGTTTAAACAAAACCCGACCAGGTTGCCCCCTTACCTTCTTGCAACTTCTT  
CCCCCTTCCCCAGGGGTCCAGTCTCCACTCCAGATCATTCTTTAGTTTAGAGCTGGGCAGTGAAGTGGATATC  
ACTGAAGAAGATAGGAAGCCGGACTCCACTGCTTACGTTGCCATGATCCCTCAGTGCATAAAGGAGGAAGACACC  
CCTTCAGATAATGATAGTGGCATCTGTATGAGCCCAGAGTCTATCTGGGGTCTCCTCAGCATAGCCCCCTCTACC  
AGGGGCTCTCCAAATAGGAGCCTCCCATCTCCAGGTGTTCTCTGTGGGTCTGCCCACCCCAAACCTTACGATCCT  
CCTGGAGAGAAGATGGTAGCAGCAAAAGTAAAGGGTGAGAACTGGATAAGAAGCTGAAAAAATGGAGCAAAAC  
AAGACAGCAGCCACTAGGTACCGCCAGAAGAAGAGGGCGGAGCAGGAGGCTCTCACTGGCGAGTGCAAAGAGCTG  
GAAAAGAAGAACGAGGCTCTAAAAGAGAGGGCAGATTCCCTGGCCAAGGAGATCCAGTACCTGAAAGATTTGATA  
GAAGAGGTCCGCAAGGCAAGGGGAAGAAAAGGGTCCCCTAGTTGAGGGTAGGTGAGGAGTGCAACGTGCTTGT  
ACATAGAGTGTCTGCTGTAGCTGTGTGTTCCAATAAATTATTTTGTAGGG



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**FIGURE 4981**

MTEMSFLSNEVLVGDLMSFPDQSGLGAEESIGLLDDYVEVAKHFKPHGFSSDKAKAGSSEWLTVDGLVSPSNN  
EDAFSGTHWMLEKMDLKEFDGALLGIDDLETMPDDLTTLDDTCNLFAPLVQETNKVPPQMVNPIGHLPE  
PDQVAPFTFLQLPLSPGVQSSTPDHSFSLELGSEVDITEEDRKPDSTAYVAMIPQCIKEEDTPSDND  
ESYLGSPQHSPSTRGSPNRSPLSPGVLCGSAHPKPYDPPGEKMVAACKVGEKLDKKLKKMEQNKTAAT  
AEQEALTGECKELEKKNEALKERADSLAKEIQYLKDLIEVRKARGKKRVP

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**FIGURE 4982**

CGCTAGCCTGCGGAGCCCGTCCGTGCTGTTCTGCGGCAAGGCCTTTCCAGTGTCACGCGGAAGGCAACTGC  
CTGAGAGGCGCGGCGTCGCACCGCCAGAGCTGAGGAAGCCGGCGCCAGTTCGCGGGGCTCCGGGCCGCACTCA  
GAGCTATGAGCTACGGCCGCCCCCTCCCGATGTGGAGGGTATGACCTCCCTCAAGGTGGACAACCTGACCTACC  
GCACCTCGCCCGACACGCTGAGGCGCGTCTTCGAGAAGTACGGGCGCGTCGGCGACGTGTACATCCCGGGGATC  
GCTACACCAAGGAGTCCCGCGGCTTCGCCTTCGTTTCGCTTTTACGACAAGCGCGACGTGAGGACGCTATGGATG  
CCATGGACGGGGCCGTGCTGGACGGCCGCGAGCTGCGGGTGCAAATGGCGCGCTACGGCCGCCCCCGGACTCAC  
ACCACAGCCGCGGGGACCGCCACCCCGCAGGTACGGGGGCGGTGGCTACGGACCGCGAGCCGAGCCCTAGGC  
GGCGTCGCGCGAGCCGATCCCGGAGTCGGAGCCGTTCCAGGTCTCGCAGCCGATCTCGCTACAGCCGCTCGAAGT  
CTCGGTCCCGCACTCGTTCTCGATCTCGGTGACCTCCAAGTCCAGATCCGCACGAAGGTCCAAGTCCAAGTCCT  
CGTCGGTCTCCAGATCTCGTTCGCGGTCCAGGTCCCGGTCTCGGTCCAGGAGTCTCCCCAGTGTCCAAGAGGG  
AATCCAAATCCAGGTGCGGATCGAAGAGTCCCCCAAGTCTCCTGAAGAGGAAGGAGCGGTGTCTCTTAAGAAA  
ATGATGTATCGGCAAGCAGTGTAAACGGAGGACTTGGGGAAAAAGGACCACATAGTCCATCGAAGAAGAGTCCTT  
GGAACAAGCAACTGGCTATTGAAAAGGTTATTTTGTAACATTTGTCTAACTTTTACTTGTTTAAGCTTTGCCTC  
AGTTGGCAAACCTTCATTTTATGTGCCATTTTGTGTCTGTTATTCAAATTTCTTGTAAATTTAGTGAGGTGAACGAC  
TTCAGATTTTCATTATTGGATTGGATATTTGAGGTAAAATTTCAATTTTGTATATAGTGCTGACTTTTTTTGTTT  
GAAATTAAACAGATTGGTAACCTAATTTGTGGCTCCTGACTTTTAAGGAAAACGTGTGCAGCCATTACACACAG  
CCTAAAGCTGTCAAGAGATTGACTCGGCATTGCCTTCATTCTTAAAATTAAAAACCTACAAAAGTTGGTGTA  
TTTGTATATGTTATTTACCTTCAGATCTAAATGGTAATCTGAACCCAAATTTGTATAAAGACTTTTCAGGTGAAA  
AGACTTGATTTTTTGAAGGATTGTTTATCAACACAATTCTAATCTCTTCTCTTATGTATTTTTGTGCACTAGG  
CGCAGTTGTGTAGCAGTTGAGTAATGCTGGTTAGCTGTTAAGGTGGCGTGTGTCAGTGCAGAGTGCTTGGCTGTT  
TCCTGTTTTCTCCCGATTGCTCCTGTGTAAAGATGCCTTGTCGTGCAGAAACAAATGGCTGTCCAGTTTATTAA  
ATGCCTGACAACCTGCACTTCCAGTCACCGGGCCTTGCAATATAAATAACGGAGCATACAGTGAGCACATCTAGCT  
GATGATAAATACACCTTTTTTTCCCTCTTCCCTTAAAAATGGTAAATCTGATCATATCTACATGTATGAACCTA  
ACATGGAAAATGTTAAGGAAGCAAATGGTTGTAACCTTTGTAAGTACTTATAACATGGTGTATCTTTTTGCTTATG  
AATATTCTGTATTATAACCATGTTTCTGTAGTTAATTAAAAACATTTTCTTGGTGTTAGCTTT

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**FIGURE 4983**

MSYGRPPPDVEGMTSLKVDNLTYRTSPDTLRRVFEKYGRVGDVYIPDRYTKESRGFAFVRFHDKRDAEDAMDAM  
DGAVLDGRELRVQMARYGRPPDSHHSRRGPPPRRYGGGYGRRSRSPRRRRRSRSRSRSRSRSRSRSRSRYRSKSR  
SRTRSRSRSTSKSRSAARRSKSKSSSVSRSRSRSRSRSRSPPPVSKRESKRSRSRSKSPPKSPEEEGAVSS

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**FIGURE 4984**

CTTGGA CT TGGAC TTCTG TCGGATCTG GACTTGGAGGTCGACCGAGATCGAGAACGAGTGCGGGACCGAGACTT  
CGAGCGGCTGTAGCGAGATCGGCTGCGAGACCTGGAACGGCTCCGACTCCGGGATCGGCTGCGGCGACGCCGCCT  
AGGGCTGCGGGCGGGACGAGCAAGCACAGCGGGGTTAATTCAGGCAGCGGGGCCGGCCCCCGCGCGXCTXC  
CCGCCCCAGGCCGCCATTATCTCGCCGCCAGACGCCATTTCCCCAGTCGCGAGGCGGGGTCTCCGCCCCGCGCCG  
CCCACACCCCGGCCACTCCCGGTGCGCAGACGGCGGAAGCTCGCGGGGTGGCCGGAGGGTCGCGAGACGCGGCGT  
GCACCCCGCCCCXGXTXCCGGGCCCCGACCACGTGCTTCGCGCGGACCTTTGTGAGGTGCGCCGGGCCTCCCG  
CGCGCCCCGCCCCGCTCCCGCGTCCCTCAGCCCCGTTTACCTGCGGCTCCGGCGTCCGTAGCCACCGCCCC  
GTACCTGCGGGGTGGCGGTCCCCGGCGGTGTGGTGTGAGTCCGGGGGGCGGCCGTAGCGCGCCATTTGCACCCG  
CAGCTCGCGGCCGTCCAGCACGGCCCCGTCCATGGCATCCATAGCGTCTCAGCGTCGCGTGTGCTGAAAGCG  
AACGAAGCGAAGCCGCGGGA CTCTTGGTGTAGCGATCCCGGGGATGTACACGTGCGCGACGCGCCCGTACTT  
CTCGAAGACGCGCTCAGCGTGTGCGGCGAGGTGCGGTAGGTAGGTGTCACCTTGAGGGAGGTACATACCCTC  
CACATCGGGAGGGGGGCGGCCGTAGCTCATAGCTCTGAGTGGCGGGCCGGAGCCCCGGAAC TGCGCGCGGCTTC  
CTCAGCTCTGGGCGGTGCGACGCCGCGCTCTCAGGCAGTTGCCTTCCGCGTGGGGACACTGGGAAAGGCCTTGC  
CGCAGAACAGCACGGACGGGCTCCGAGGCTAGCGCACCTGAGTAACA ACTGGGCGGGCAGCCGGCCTCTGCGCC  
CGTTTATATCGCTCCTCACAAAATGGCGCCCGCGCCACCCGAAATGAAACCTTCTGATTGGCCACCGCGCCCC  
GCTTCGTAAACGACCTGCCGCGCCCCGCCCTACCCGAAGCGCTGCGCACAGCCGGCGGGCGGGCCAAAAA  
GCGCGGAGTCACGGCTGGAGGGAGGGGAGCGGAATTAGCGGGCAGTTGGAAAGCCCGCAAACGCTTTTTCCGC  
CTGGGAGGCCGGACGATCGCGATTGGGCAGGAGXGXAAGAGGAGGTGCTCCCATCTGGGCCCCACCTTTTTTT  
CATGCCAATACTCCAAGTTCACGCCCCTTTTTTGCTCAGCCGTCAGCCCCGTCTCCGTCTGAAGAGTGCTTCTGC  
CCTCATTGCTCTCTCCGTGTGACCCGGCCCCCTCAGACTCCGCTGCGTCTCTCTCGGCCCGTCCAGCCGTTT  
CTGACTGCTCTTCGCCGGAGTCCGCTTCCCAACCCCTTTTCGCCAGAGCCCGAGAGCTCCGTGGCTCTGCGTCC  
TGGCGGTGGGGACTCCCGCCGAGCGCTTGCGCGTGCCAGGTACCCGGGACTACGTTTCCXAXGCGXGXGCC  
GAGCGGCCGGCGCCGCGCTGCGGT CAGGTGACCCGGTGCCTGGCCGAGTGAGTCAGGCTGGGAGGGCGGGG  
CGCGCCGGCTGCTGCGGCTGGCACTTGGCCCTTTAATCCCTTCGTGGGCCCCCTCAACCTGGAGCGGATAAATC  
TTGGCGCTTCTXCCGGGGTTGTGCTCTTCCGTACTCGGATCGCTTCTTAGGAGTATCCTAACTGCCGCTGGGGA  
GAACTTCGCCCTAAACCTGGGGTTCCGATCCAGGAAC TGAAGTTGACAGCTTGGCTGCCTGGCTCCTACATCTG  
CCTTCTCCACTACCATCTCATTTCTTTCTCCAGGATTGTCAGTGGCTTCGCCCCGAGGAGAGCTGACTGCCCTG  
GGCTGCTGCCTCCGGCAGAGCTGAGCCAAAATGTCCCGGAATCTAAAAAGCTTTTCAACATCATTATTTAGGA  
GTTGCCTTTATGTTTATGTTCACTGCCTTTCAAACCTTGTGG

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**FIGURE 4985**

CCGCCAGATTGGAATCGCGGGACCCGTTGGCAGAGGTGGCGGGCGGGCATGGGTGCCCCGACGTTGCCCCCTGC  
CTGGCAGCCCTTTCTCAAGGACCACCGCATCTCTACATTCAAGAACTGGCCCTTCTTGAGGGCTGCGCCTGCAC  
CCCGGAGCGGATGGCCGAGGCTGGCTTCATCCACTGCCCCACTGAGAACGAGCCAGACTTGGCCCACTGTTTCTT  
CTGCTTCAAGGAGCTGGAAGGCTGGGAGCCAGATGACGACCCCATAGAGGAACATAAAAAGCATTTCGTCCGGTTG  
CGCTTTCTTTCTGTCAAGAAGCAGTTTGAAGAATTAACCCCTTGGTGAATTTTTGAAACTGGACAGAGAAAGAGC  
CAAGAACAAAATTGCAAAGGAAACCAACAATAAGAAGAAAGAAATTTGAGGAACTGCGAAGAAAGTGCGCCGTGC  
CATCGAGCAGCTGGCTGCCATGGATTTGAGGCCTCTGGCCGGAGCTGCCTGGTCCCAGAGTGGCTGCACCACTTCC  
AGGGTTTTATTCCCTGGTGCCACCAGCCTTCTGTGGGCCCCCTTAGCAATGTCTTAGGAAAGGAGATCAACATTTT  
CAAATTAGATGTTTCAACTGTGCTCCTGTTTTGTCTTGAAAGTGGCACCAGAGGTGCTTCTGCCTGTGCAGCGGG  
TGCTGCTGGTAACAGTGGCTGCTTCTCTCTCTCTCTCTTTTTTGGGGGCTCATTTTTGCTGTTTTGATTCCCG  
GGCTTACCAGGTGAGAAGTGAGGGAGGAAGAAGGCAGTGTCCCTTTTGCTAGAGCTGACAGCTTTGTTGCGGTGG  
GCAGAGCCTTCCACAGTGAATGTGTCTGGACCTCATGTTGTTGAGGCTGTCACAGTCTGAGTGTGGACTTGGCA  
GGTGCCTGTTGAATCTGAGCTGCAGGTTCCCTATCTGTACACCTGTGCCTCCTCAGAGGACAGTTTTTTTGTG  
TTGTGTTTTTTTGTTTTTTTTTTTTGGTAGATGCATGACTTGTGTGTGATGAGAGAATGGAGACAGAGTCCCTGG  
CTCCTCTACTGTTTAACAACATGGCTTTCTTATTTTGTGTTGAATTGTTAATTCACAGAATAGCACAAACTACAAT  
TAAACTAAGCACAAAGCCATTCTAAGTCATTGGGGAAACGGGGTGAACCTCAGGTGGATGAGGAGACAGAATAG  
AGTGATAGGAAGCGTCTGGCAGATACTCTTTTGCCACTGCTGTGTGATTAGACAGGCCCACTGAGCCGCGGGG  
ACATGCTGGCCGCTCCTCCCTCAGAAAAGGCAGTGGCCTAAATCCTTTTTAAATGACTTGGCTCGATGCTGTGG  
GGGACTGGCTGGGCTGCTGCAGGCCGTGTGTCTGTACGCCAACCTTCACATCTGTACGTTCTCCACACGGGGG  
AGAGACGCAGTCCGCCCAGGTCCCCGCTTTCTTTGGAGGCAGCAGCTCCCGCAGGGCTGAAGTCTGGCGTAAGAT  
GATGGATTTGATTGCCCCCTCCTCCTGTCTAGAGCTGCAGGGTGGATTGTTACAGCTTCGCTGGAACCTCTGG  
AGGTCATCTCGGCTGTTCCCTGAGAAATAAAAAGCCTGTCATTTT

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**FIGURE 4986**

MGAPTLPPAWQPFLKDHRISTFKNWPFLEGCACTPERMAEAGFIHCPTENEPDLAQCFKKELEGWEPDDPIE  
EHKKHSSGCAFLSVKKQFEELTLGEFLKLDREKAKNIAKETNNKKKEFEETAKKVRRAIEQLAAMD

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**FIGURE 4987**

GCGGCGGCGGCAGCGGCGGCGACGGCGACATGGAGAGCGGGGCCTACGGCGCGGCCAAGGCGGGCGGCTCCTTCG  
ACCTGCGGCGCTTCCTGACGCAGCCGCAGGTGGTGGCGCGCGCCGTGTGCTTGGTCTTCGCCTTGATCGTGTTCT  
CCTGCATCTATGGTGAGGGCTACAGCAATGCCACGAGTCTAAGCAGATGTACTGCGTGTTCAACCGCAACGAGG  
ATGCCTGCCGCTATGGCAGTGCCATCGGGGTGCTGGCCTTCCTGGCCTCGGCCTTCTTCTTGGTGGTCGACGCGT  
ATTTCCCCCAGATCAGCAACGCCACTGACCGCAAGTACCTGGTCATTGGTGACCTGCTCTTCTCAGCTCTCTGGA  
CCTTCCTGTXGGTTTGTTGGTTTCTGCTTCCTCACCACCAGTGGGCAGTCACCAACCCGAAGGACGTGCTGGTG  
GGGGCCGACTCTGTGAGGGCAGCCATCACCTTCAGCTTCTTTTCCATCTTCTCCTGGGTAGGATGGCCAGGGGCC  
GGTTCTTGGGTCAAGGXGTGTGGAAGGGGGGGXAXCCCCCAXCCCACCTGTACCCTGCTGTGCTCCCCCTGCAGG  
GTGTGCTGGCCTCCCTGGCCTACCAGCGCTACAAGGCTGGCGTGGACGACTTCATCCAGAATTACGTTGACCCCA  
CTCCGGACCCCAAXACACTGCCTACGCCTCCTACCCAGGTGCATCTGTGGACAACTACCAACAGCCACCCCTTACC  
CAGAACGCGGAGACCACCGAGGGCTACCAGCCGCCCCCTGTGTACTGAGCGGCGGTTAGCGTGGGAAGGGGGACA  
GAGAGGGCCCTCCCXCTCTGCCCTGGACTTTCCCATGAGCCTCCTGGAAGTACC

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**FIGURE 4988**

CTTACTGCGGGACGGCCTTGGAGAGTACTCGGGTTTCGTGAACTTCCCGGAGGCGCAATGAGCTGCATTAACTGC  
CCACTGTGCTGCCTGGCTCCCCAGCAAGACCCGGGGGCGAGATCCAGGTGATTCTCGGGCCGATGTTCTCAGGAA  
AAAGCACAGAGTTGATGAGACGCGTCCGTCGCTTCCAGATTXGCTCAGTACAAGTGCCTGGTGATCAAGTATGCC  
AAAGACACTCGCTACAGCAGCAGXCTTCTGCACACATGACCGGAACACCATGGAGGCACTGCCCGCTGCCTGCT  
CCGAGACGTGGCCCAGGAGGCCCTGGGCGTGGCTGTATAGGCATCGACGAGGGGCAGTTTTTCCCTGACATCGT  
GGAGTTCTGCGAGGCCATGGCCAACGCCGGAAGACCGTAATTGTGGCTGCACTGGATGGGACCTTCCAGAGGAA  
GCCATTTGGGGCCATCCTGAACCTGGTGCCGCTGGCCGAGAGCGTGGTGAAGCTGACGGCGGTGTGCATGGAGTG  
CTTCCGGGAAGCCGCCTATACCAAGAGGCTCGGCACAGAGAAGGAGGTGAGGTGATTGGGGGAGCAGACAAGTA  
CCACTCCGTGTGTCGGCTCTGCTACTTCAAGAAGGCCTCAGGCCAGCCTGCCGGGCCGACAACAAAGAGAACTG  
CCCAGTGCCAGGXAAAGCCAGGGGAAGCCGTGGCTGCCAGGAAGCTCTTTGCCCCACAGCAGATTCTGCAATGCA  
GCCCTGCCAACTGAGGGACCTGCGAGGGCCGCCGCTCCCTTCCCTGCCACTGCCGCCTACTGGACGCTGCCCTGC  
ATGCTGCCAGCCACTCCAGGAGGAAGTCGGGAGGCGTXGGAGGGTGACCACACCTTGGCCTTXCTGGGAACTCT  
CCTTTGTGTGGCTGCCCCACCTGCCGCATGCTCCCTCCTCTCCTACCCACTGGTCTGCTTAAAGCTTCCCTCTCA  
GCTGCTGGGACGATCGCCCAGGCTGGAGCTGGCCCCGCTTGGTGGCCTGGGATCTGGCACACTCCCTCTCCTTGG  
GGTGAGGGACAGAGCCCCACGCTGTTGACATCAGCCTGCTTCTTCCCCTCTGCGGCTTTCAGTGTGAGTTTCTG  
TTCTCCCTGGGAAGCCTGTGCCAGCACCTTTGAGCCTTGGCCCACACTGAGGCTTAGGCCTCTCTGCCTGGGATG  
GGCTCCCACCCCTCCCTGAGGATGGCCTGGATTACGCCCTCTTGTTTCCTTTTGGGCTCAAAGCCCTTCTTACC  
TCTGGTGATGGTTTCCACAGGXAAACAGCATCTTTCACCAAGATGGGTGGCACCAACCTTGCTGGGACTTGGA  
TCCCAGGGGCTTATCTCTTCAAGTGTGGAGAGGGCAGGGTCCACGCCTCTGCTGTAGCTTATGAAATTAATAAT  
T



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**FIGURE 4989**

AATCGAAAGTAGACTCTTTTCTGAAGCATTTCTGGGATCAGCCTGACCACGCTCCATACTGGGAGAGGCTTCTG  
GGTCAAAGGACCAGTCTGCAGAGGGATCCTGTGGCTGGAAGCGAGGAGGCTCCACACGGCCGTTGCAGCTACCGC  
AGCCAGGATCTGGGCATCCAGGCACGGCCATGACCCCTCCGAGGCTCTTCTGGGTGTGGCTGCTGGTTGCAGGAA  
CCCAAGGCGTGAACGATGGTGACATGCGGCTGGCCGATGGGGCGCCACCAACCAGGGCCGCTGGAGATCTTCT  
ACAGAGGCCAGTGGGGCACTGTGTGTGACAACCTGTGGGACCTGACTGATGCCAGCGTCGTCTGCCGGGCCCTGG  
GCTTCGAGAACGCCACCCAGGCTCTGGGCAGAGCTGCCTTCGGGCAAGGATCAGGCCCCATCATGCTGGACGAGG  
TCCAGTGCACGGGAACCGAGGCCTCACTGGCCGACTGCAAGTCCCTGGGCTGGCTGAAGAGCAACTGCAGGCACG  
AGAGAGACGCTGGTGTGGTCTGCACCAATGAAACCAGGAGCACCCACACCCTGGACCTCTCCAGGGAGCTCTCGG  
AGGCCCTTGGCCAGATCTTTGACAGCCAGCGGGGCTGCGACCTGTCCATCAGCGTGAATGTGCAGGGCGAGGACG  
CCCTGGGCTTCTGTGGCCACACGGTCATCTGACTGCCAACCTGGAGGCCAGGCCCTGTGGAAGGAGCCGGGCA  
GCAATGTCACCATGAGTGTGGATGCTGAGTGTGTGCCCATGGTCAGGGACCTTCTCAGGTACTTCTACTCCCGAA  
GGATTGACATCACCTGTGCTCAGTCAAGTGCTTCCACAAGCTGGCCTCTGCCTATGGGGCCAGGCAGCTGCAGG  
GCTATGCGCAAGCCTCTTTGCCATCCTCTCCCCAGGACCCCTCGTTCCAGATGCCCCCTGGACCTGTATGCCT  
ATGCAGTGGCCACAGGGGACGCCCTGTGGAGAAGCTCTGCCTACAGTTCCTGGCCTGGAACCTCGAGGCCTTGA  
CGCAGGCCGAGGCCTGGCCAGTGTCCCCACAGACCTGCTCCAAGTGTGCTGCCAGGAGCGACCTGGCGGTGC  
CCAGCGAGCTGGCCCTACTGAAGGCCGTGGACACCTGGAGCTGGGGGGAGCGTGCCTCCCATGAGGAGGTGGAGG  
GCTTGGTGGAGAAGATCCGCTTCCCCATGATGCTCCCTGAGGAGCTCTTTGAGCTGCAGTTCAACCTGTCCCTGT  
ACTGGAGCCACGAGGCCCTGTTCAGAGAAGAACTCTGCAGGCCCTGGAATCCACACTGTGCCCTTCCAGTTGC  
TGGCCCGGTACAAAGGCCCTGAACCTACCGAGGATACCTACAAGCCCCGATTACACCTCGCCACCTGGAGTG  
CCTTTGTGACAGACAGTTCTGGAGTGACGGAAGTCACAAGTGGTCTATCAGTCCAGACGGGGGCTTTGGTCA  
AATATTCTTCTGATTACTTCCAAGCCCCCTCTGACTACAGATACTACCCCTACCAGTCTTCCAGACTCCACAAC  
ACCCAGCTTCTCTTCCAGGACAAGAGGGTGTCTGGTCCCTGGTCTACCTCCCCACCATCCAGAGCTGCTGGA  
ACTACGGCTTCTCTGCTCCTCGGACGAGCTCCCTGTCTGGGCTCACCAGTCTGGCGGCTCAGATCGCACCA  
TTGCCTACGAAAACAAAGCCCTGATGCTCTGCGAAGGGCTCTTCTGTGGCAGACGTCACCGATTTGAGGGCTGGA  
AGGCTGCGATTCCAGTGCCTGGACACCAACAGCTCGAAGAGCACCTCCTCCTTCCCCTGCCGGCAGGGCACT  
TCAACGGCTTCCGCACGGTCATCCGCCCTTCTACCTGACCAACTCCTCAGGTGTGGACTAGACGGCGTGGCCCA  
AGGGTGGTGAGAACCGGAGAACCCAGGACGCCCTCACTGCAGGCTCCCCTCCTCGGCTTCTTCTCTCTGCAA  
TGACCTTCAACAACCGGCCACCAGATGTCGCCCTACTACCTGAGCGCTCAGCTTCAAGAAATTACTGGAAGGCT  
TCCACTAGGGTCCACCAGGAGTTCTCCACCACCTCACCAGTTTCCAGGTGGTAAGCACCAGGACGCCCTCGAGG  
TTGCTCTGGGATCCCCCACAGCCCCTGGTCAGTCTGCCCTTGTCACTGGTCTGAGGTCAATAAAATTACATTGA  
GGTTCCTA

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**FIGURE 4990**

MTPPRLFWVWLLVAGTQGVNDGDMRLADGGATNQGRVEIFYRGQWGTVCNLDLTDASVVCRALGFENATQALG  
RAAFGQSGPIMLDEVQCTGTEASLADCKSLGWLKSNCRHERDAGVVCTNETRSTHTLDLSRELSEALGQIFDSQ  
RGCDLSISVNVQGEDALGFCGHTVILTANLEAQALWKEPGSNVTMSVDAECVPMVRDLLRYFYSSRRIDITLSSVK  
CFHKLASAYGARQLQGYCASLFAILLPQDPSFQMPDLIYAYAVATGDALLEKLCLQFLAWNFEALTQAEAWPSVP  
TDLQLLLPRSDLAVPSELALLKAVDTWSWGERASHEEVEGLVEKIRFPMMLPEELFELQFNLSLYWSHEALFQK  
KTLQALEFHTVPFQLLARYKGLNLTEDTYKPRIYTSEPTWSAFVTDSSWSARKSQLVYQSRXGAFGQIFF

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**FIGURE 4991**

GTGCCTCCCATGAGGAGGTGGAGGGCTTGGTGGAGAAGATCCGCTTCCCCATGATGCTCCCTGAGGAGCTCTTG  
AGCTGCAGTTCAACCTGTCCCTGTACTGGAGCCACGAGGCCCTGTTCCAGAAGAAGACTCTGCAGGCCCTGGAAT  
TCCACACTGTGCCCTTCCAGTTGCTGGCCCGGTACAAAGGCCTGAACCTCACCAGGATACCTACAAGCCACGGA  
AGTCACAACCTGGTCTATCAGTCCAGACGGGGGCCCTTGGTCAAATATTCTTCTGATTACTTCCAAGCCCCCTCTG  
ACTACAGATACTACCCCTACCAGTCCTTCCAGACTCCACAACACCCCACTTCCTCTTCCAGGACAAGAGGGTGT  
CCTGCTCCCTGGTCTACCTCCCCACCATCCAGAGCTGCTGGAACCTACGGCTTCTCCTGCTCCTCGGACGAGCTCC  
CTGTCTTGGGCCTACCAAGTCTGGCGGCTCAGATCGCACCATTGCCTACGAAAACAAAGCCCTGATGCTCTGCG  
AAGGGCTCTTCGTGGCAGACGTCACCGATTTCGAGGGCTGGAAGGCTGCGATTCCCAGTGCCTGGACACCAACA  
GCTCGAAGAGCACCTCCTCCTTCCCTGCCCCGGCAGGGCACTTCAACGGCTTCCGCACGGTCATCCGCCCTTCT  
ACCTGACCAACTCCTCAGGTGTGGACTAGACGGCGTGCCCCAAGGGTGGTGAGAACCGGAGAACCCCAGGACGCC  
CTCACTGCAGGCTCCCCCTCCTCGGCTTCCTTCTCTGCAATGACCT

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FIGURE 4992A

TGCTCCCTCCAAATCCAAGTCCAGCAGTTCTCTCTTCTCCACGTCATCCTCCTCTTCTCAGATGAAGAGGA  
TGACAGTGACTTAGATGCTAAGAGGGGTCCCCGGGGCCGCGAGACCCACCCAGTGCCGCGAGAAGAAGGCCAGAT  
CCTGGTGGCCAAACCCGAGCTGAAGGATCCCATCCGGAAGAAGCGGGACGAAAGCCCCTGCCCCAGAGCAAAA  
GGCAACCCGAAGACCCGTGAGCCTGGCCAAAGTGCTGAAGACCGCCCGGAAGGATCTGGGGGGCCCCGGCCAGCAA  
GCTGCCCCCTCCACTCAGCGCCCCCGTTGAGGCCTGGCAGCTCTGAAGGCCACGCCAAGGAGGCCTGTGGCGG  
CCCCAGTGCCATGGCCACCCAGAGAACCTGGCCAGCCTAATGAAGGGCATGGCCAGTAGCCCCGGCCGGGGTGG  
CATCAGCTGGCAGAGCTCCATCGTGCACTACATGAACCGGATGACCCAGAGCCAGGCCAGGCTGCCAGCAGGTT  
GGCGCTGAAGGCCAGGCCACCAACAAGTGGCGCCTCGGGCTGGACCTGAAGGTGAGGACGCGAAGAGGGAGCT  
GGGAATGAGCCCTCCAGGAAGCAAAATCCCGAAGGCCCCACGCGTGGGGCTGTGGAGCAGAAAGTGGGGAACAC  
AGGGGGCCCCCGCACACCCATGGTGCCAGCAGGGTGCCTGCTGGGTGCCAGGCCCCAGCCAGCACCCACCCA  
GGAGCTGAGCCTCCAGGCTTGGACTTGCAGAGTGTCAAGAATGGCATGCCCGGGGTGGGTCTCCTTGCCCCCA  
CGCCACCGCCACCAAGGTGTCCCGGCCACCAACCCAGCCCTGGGAAGGGCACTGGGAGTGGCTCATTGGGGC  
CAGCGGGGCCACCATGCCACCGACACAAGCAAAAGTGAGAAGCTGGCTTCCAGAGCAGTGGCGCCACCCACCCC  
TGCCAGCAAGAGGGACTGTGTCAAGGGCAGTGCTACCCCACTGGGCAGGAGAGCCGACAGCCCCCGGAGAAGC  
CCGCAAGCGGCCACACTGCCAGAGATGAGCGCAGGTGAGGAGAGTAGCAGCTCGGACTCCGACCCCGACTCCGC  
CTCGCCGCCAGCACTGGACAGAACCCGTAGTGCTCGTTTACAGCCAGCCAGGACTGGAAGCCACCCGAGCCT  
CATCGAGCAGTATTTGTACCGACGTCAGTGCCAACCTCATCACCGTCACAGTGAAGGAGTCTCCACACAGCGT  
GGGCTTCTTCAACCTGAGGCATTACTGAAGCCCCGGCGCCACCACTGCGCGGTCTTACTCCCTTCCCTGCCTA  
TGGTGTGCTTGGCTAAGTGACTCCAGCCCAAGCCCCCTCAAGAGTCTGGGTGGGGGAGGAGGAGTGGGTGGC  
CTCCTTGATGGGCAGGCTTGAAGGGACTTCTCCCGCACCCCACTCTGTCCAGGACATAGGGCAGGGGGCCTCA  
CTGCCTTGTGGTCTCCACCTTGTCTTCTACCTCTGCAGGCCTCTTGTCTCTCCCTCTTGCCTCAGGAAACCCGG  
TGGACCTGTGGCTCCAGGTGACTGTCTTGAACAGAGCGGGCTTCTTATGGCTGCGTTGTTGCTGAGTTTGAAC  
TGCTCCTCCCTGGCCTGCGTGACTGAATCACAGCTTTGGTCCCTGTCTTGCAGGGGCTGAGGTGTCAGGAGGGGA  
CTTCTGGCCACCTTGCCTTACGCCCTGGAGTGGGCAGAGAGTATTGTGGGGAGGCATGGCCAGTGGGACTAGTG  
TTCCCTCCATCTGGCCACAGCTTTTGGGAGATGGGGTGGGCAGGGGTGGTCTGGCTGGCATTGCCTGAGCCGGC  
AGTGATGAAGTGGGAGCTTGCCCTTGACAGGTGGGGGCTGGCTGGGGCCTTAATGTGAAAAGACAGTGGCAGGC  
AGCTGGAGTAGAGCGAGCCAGCAGCCCTAAAAGGCTGCCTTCATGGCCATCTAGCCCCAGTTACGGGCAGCATC  
CATAGCCCAAGCCAGCGTGGGTGGGGCGGGGGTGGTCCACAGCTGGGTCCACCTGAAGAGCCTCCGTGCCT  
CGGAGCAGGAGAGGCAGGCTATGGCTGCCACCCTCCCTCCTGCCTGTGTCCAGTGAGAACTGACCTGAGTCCCC  
TTCAAACCCAGACCCACCTCCTGCCCCAGGCCCACTGAAGCATGTTCCATTCTAAAAGGCCAGAGTTACAGTG  
TGTCCCAAGGAAAACCCAAAGTGGAGGTGCTCAGGTCCAGGGGAGTCCAGTGGGCAGGACCCTTGGCAGGCAAGC  
CCCTCCCTTCACTCCCAGGACCTACCTTCTGCTAGTAAAGGACTGGCTTCATTCTAATTATGGCCACAGACTGC  
CCCGGAGACCTGGAGGACAGCAGTGCTGGCACTTGGGTGTCCATGGGCCCCGTCTGCCGGCTCTGCCTGTGTGCA  
AGTGTGGCGGTGGGTCCAGCCAACAACCTCCCTACGTCTGTGTGGGGCCCTGCCCAAGTGGATGAGGCATTCT  
TGAGGAGTATCATTTTCCCTGACAATCCCCATCACCTTTAGGGGTTCCTGCTTGGCTCCTTTCCAGCTGAAAAA  
CTAGACCTGTGCCATTGGGGAAGCTGGACAAAGTCTAGGGGGCCCGCCTGGTAGAGGGTCCCGGGAAGCTGGATC  
TGTCAGCCTCGGCCCTGAGGCCCTGTAACTCAAGACTGTGAGCTGCCTCTAGGTGGTCACGTCTGGGAGCTAG  
CTTGATGGCTTCTGACCAGTATCAGGATTTCTGTTCTGAGAGCAGCGTGGGCAGCAAGGCAGGGCAGCCCAGAG  
GTGGCAGCGGCAGGCAATCTGGTCACTAGGTCTTTGTGATGCCAAAAATAAAGAGGGTGGGGTGGGTGCTTTCT  
GTTCTCTGATTGGATGGAGTCCGCCAGCAGGCATGGGGCTACATTCCAGTGCCTGACTATAGGGAGGCACTCCT  
GATTCCATGGAGCAGCCCGGACTTTGAGAATGGGCTCTGGTTTGGGGGGGCAGGCGTACCAGACTGCAAGACCC  
CCCAGTACCTCACCGTGCCAAATAGGAAGAGGTGGCCTTGGTGTAGCCAAATGATCTTTTTAAGAGTGTGCCTT  
TGGGGAGGACCCATGTCCATGGCTTCTGTGAGGGCCATCCATATGCCAGCTGGGGGCCAGGCCACAGTGGCCAT  
ATTGGCTGCAGCAGGAATGGTGCCACCTCGGCGAATTGAAGGGCTAAGAGTCCAGATAGCTAGGCCAGAGCTG  
GAAGCAGACAGTAAGGGGAAGAGCTGCTCCACAGAAGAGGGAGAGATTCCAGCTCACTGCGCAGCCTGGGAGGA  
GGCGTGGATCCTGGCAGCTGAGCCTCAGGCACCAGCCTCCCTGTGCTCGACAGCAAAGTCTTGACTCCTTCTG  
CTGAGCACTGTGCTACCTTCACTGCTCCAAAGCCAGACTAACAGCTCTCCAAGCCCTTGGGGTGACTCGGCTTCC  
AGGAGCTGTGGAGAAATGAGGATGTCTGTCCCTGTCTGCCTGGGCAGGCCAGATTCTCCCCAGCAGCCGGGT

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**FIGURE 4992B**

TCTCCAGACCCTGATTCCGGTGCCTTTCTGTTTACCAGCTACTTCAATCCCAAAGTTTGAATCTGCAGATACCTTA  
CTCCCAGCCACTTTGCCTTCTTACTGTGTTGTGTGTTTTTCCTGGTGCTTCAAGAGCGTGTGCAGGGCAAGTGCC  
GTCACTGGGAAGTGCACCAGATGCTCAGACTTGGTTGTCTTATGTTTACCAATAAATAAAAGTAGACTTTTTCTA  
TTTTTATTTGCTGCTATTTGTGTGTGTGTTTGTGTTGTGTAGCTAGGTATCTGCACTTCTGACGATGCATTGTT  
GCTTTTTTCCCGAAGTCCCGCAGGAAGTGTGGCAATGGTGTGTGTGTGAAATGGTGTGTTAACC GCGTTTTGTTT  
GCTCCTGTATTGAATAGGAAGCAGTGGCCAGTCTGTCTTCCTTAGAGATGTTAGCATATTTTTATATGTATATAT  
TTTGTACCAAAAAAGAGTGTTCCTTGTTTTGGTTACACTCGAAATTCTGACCTAGCTGGAGAGGGCTCTGGGCCG  
AGAGCTTTCCTAAGGGGAGACTTCAGGGGAGGATCAAGCTTTGAACCAAAGCCAATCACTGGCTTGATTGTGT  
TTTTTAATTAAAAAAAATCATTTCATGTATGCCACTTCTAA

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**FIGURE 4993**

MATPENLASLMKGMASSPGRGGISWQSSIVHYMNRMTQSQAQAASRLALKAQATNKCGLGLDLKVRTQKGEIGMS  
PPGSKIPKAPSGGAVEQKVGNTGGPPHTHGASRVPAGCPGPQAPPTQELSLQVLDLQSVKNGMPGVGLLARHATA  
TKGV PATNPAPGKGTGSLIGASGATMPTDTSKSEKLASRAVAPPTPASKRDCVKGSATPSGQESRTAPGEARKA  
ATLPEMSAGEESSSSDSDPDSASPPSTGQNPSVSVQTSQDWKPTRSLIEHVFTDVTANLITVTVKESPTSVGFF  
NLRHY

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**FIGURE 4994A**

GCGCCTGCGCGGGAGGCCGCGTCACGTGACCCACCGCGGACCCGCCCCGCGACGAGCTCCCGCCGGTCACGTGAC  
CCGCTCTGCGCGCCCCCGGGACGACCCCGGAGTCTCCGCGGGCGGCCAGGGCGCGCGTGC GCGGAGGTGAGCC  
GGGCGGGGGCTGCGGGGCTTCCCTGAGCGCGGGCGGGTGGTGGGGCGGTGCGCTGCCCGCGCGGCTCTCAGT  
TGGGAAAGCTGAGGTTGTGCGCGGGGCCGCGGGTGGAGGTGCGGGATGAGGCAGCAGGTAGGACAGTGACCTCGG  
TGACGCGAAGGACCCCGGCCACCTCTAGGTTCTCTCGTCCGCCCCGTTGTTACGCGAGGGAGGCTCTGCGCGTGC  
CGCAGCTGACGGGAACTGAGGCACGGAGCGGGCTGTAGGAGCTGTCCAGGCCATCTCCAACCATGGGAGTGA  
GGCACC CGCCCTGCTCCCACCGGCTCTGCGCCGTCTGCGCCCTCGTGTCTTGGCAACCGCTGCACTCTGGGGC  
ACATCCTACTCCATGATTTCTGCTGGTTCCCGAGAGCTGAGTGGCTCTCCCCAGTCTGGAGGAGACTCACC  
CAGCTCACCAGCAGGGAGCCAGCAGACCAGGGCCCCGGGATGCCAGGCACACCCCGGCGTCCCAGAGCAGTGC  
CCACACAGTGCGACGTCCCCCAACAGCCGCTTCGATTGCGCCCCTGACAAGGCCATCACCAGGAACAGTGCG  
AGGCCCCGCGGCTGTTGCTACATCCCTGCAAAGCAGGGGCTGCAGGGAGCCAGATGGGGCAGCCCTGGTGCTTCT  
TCCCACCCAGCTACCCAGCTACAAGCTGGAGAACCTGAGCTCCTCTGAAATGGGCTACACGGCCACCTGACCC  
GTACCACCCCACTTCTTCCCCAAGGACATCTGACCCTGCGGCTGGACGTGATGATGGAGACTGAGAACCGCC  
TCCACTTCACGATCAAAGATCCAGCTAACAGGCGCTACGAGGTGCCCTTGGAGACCCCGCATGTCCACAGCCGGG  
CACCGTCCCCACTCTACAGCGTGGAGTTCTCCGAGGAGCCCTTCGGGGTGATCGTGC GCGCGCAGCTGGACGGCC  
GCGTGCTGCTGAACACGACGGTGGCGCCCTGTTCTTTGCGGACCACTTCCTTCAGCTGTCCACCTCGCTGCCCT  
CGCAGTATATCACAGGCCTCGCCGAGCACCTCAGTCCCCTGATGCTCAGCACCAGCTGGACCAGGATCACCTGT  
GGAACCGGGACCTTGCGCCACGCCCGGTGCGAACCTCTACGGGTCTCACCTTTCTACCTGGCGCTGGAGGACG  
GCGGGTGGGCACACGGGGTGTCTGCTAAACAGCAATGCCATGGATGTGGTCTGCAGCCGAGCCCTGCCCTTA  
GCTGGAGGTGACAGGTGGGATCCTGGATGTCTACATCTTCTGGGCCAGAGCCCAAGAGCGTGGTGCAGCAGT  
ACCTGGACGTGTGGGATAACCGTTTCATGCCGCCATACTGGGGCTGGGCTTCACCTGTCCGCTGGGGCTACT  
CCTCCACCGCTATCACCGCCAGGTGGTGGAGAATGACCAGGGCCCACTTCCCCCTGGACGTCCAGTGGAAACG  
ACCTGGACTACATGGACTCCCGGAGGGACTTCAGTTCAACAAGGATGGCTTCCGGGACTTCCCGGCCATGGTGC  
AGGAGCTGCACCAGGGCGGCCGCGCTACATGATGATCGTGGATCCTGCCATCAGCAGCTCGGGCCCTGCCGGA  
GCTACAGGCCCTACGACGAGGGTCTGCGGAGGGGGTTTTTCATCACCAACGAGACCGCCAGCCGCTGATTGGGA  
AGGTATGGCCCCGGTCCACTGCCTTCCCCGACTTCACCAACCCACAGCCCTGGCCTGGTGGGAGGACATGGTGG  
CTGAGTTCCATGACCAGGTGCCCTTCGACGGCATGTGGATTGACATGAACGAGCCTTCCAATTCTACAGGGCT  
CTGAGGACGGCTGCCCCAACAATGAGCTGGAGAACCACCTACGTGCCCTGGGGTGGTGGGGGGACCTCCAGG  
CGGCCACCATCTGTGCCTCCAGCCACCACTTCTCTCCACACACTACAACCTGCACAACCTCTACGGCCTGACCG  
AAGCCATCGCTCCACAGGGCGCTGGTGAAGGCTCGGGGGACAGCCCAATTTGTGATCTCCCGCTCGACCTTTG  
CTGGCCACGGCCGATACGCCGGCCACTGGACGGGGACGTGTGGAGCTCCTGGGAGCAGCTCGCCTCTCCGTC  
CAGAAATCTGCAGTTAACCTGTGGGGGTGCCTCTGGTTCGGGGCCGAGCTCTGCGGCTTCTGGGCAACACT  
CAGAGGAGCTGTGTGCGCTGGACCCAGCTGGGGGCTTCTACCCCTTCATGCGGAACCACAACAGCCTGCTCA  
GTCTGCCCCAGGAGCCGTACAGCTTCAGCGAGCCGCCCCAGCAGGCCATGAGGAAGGCCCTCACCTGCGCTACG  
CACTCCTCCCCACCTCTACACACTGTTCACCAGGCCACGTGCGGGGGAGACCGTGGCCCGGCCCTCTTCC  
TGGAGTTCCCCAAGGACTCTAGCACCTGGACTGTGGACCACAGCTCCTGTGGGGGGAGGCCCTGCTCATACCC  
CAGTGCTCCAGGCCGGAAGGCCGAAGTGACTGGCTACTTCCCCTTGGGCACATGGTACGACCTGCAGACGGTGC  
CAGTAGAGGCCCTTGGCAGCTCCACCCCACTGACGTCCCCGTGAGCCAGCCATCCACAGCAGGGGCGAGT  
GGGTGACGCTGCCGGCCCCCTGGACACCATCAACGTCCACCTCCGGGCTGGGTACATCATCCCCCTGCAGGGCC  
CTGGCCTCACAACCACAGAGTCCCGCCAGCAGCCATGGCCCTGGCTGTGGCCCTGACCAAGGGTGGGGAGGCC  
GAGGGGAGCTGTTCTGGGACGATGGAGAGAGCCTGGAAGTGTGAGCGAGGGGCTACACACAGGTATCTTCC  
TGGCCAGGAATAACACGATCGTGAATGAGCTGGTACGTGTGACCAGTGAGGGAGCTGGCTGCAGCTGCAGAAGG  
TGACTGTCTGGGCTGGCCACGGCGCCCCAGCAGTCTCTCCAACGGTGTCCCTGTCTCCAACCTCACCTACA  
GCCCCGACACCAAGGTCTGGACATCTGTGTCTCGTGTGTGATGGGAGAGCAGTTTCTGTCAGCTGGTGTAGC  
CGGGCGGAGTGTGTAGTCTCTCCAGAGGGAGGCTGGTTCCCCAGGGAAACAGAGCCTGTGTGCGGGCAGCAGCT  
GTGTGCGGGCTGGGGTTGCATGTGTACCTGGAGCTGGGCACTAACCAATTCCAAGCCCGGCATCGCTGTGTT  
CCACCTCCTGGGCCGGGGCTCTGGCCCCAACGTGTCTAGGAGAGCTTCTCCCTAGATCGCACTGTGGGCCGGG  
GCCCTGGAGGGCTGCTCTGTGTTAATAAGATTGTAAGGTTGCCCTCCTCACCTGTTGCCGCGATGCGGGTAGTA

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**FIGURE 4994B**

TTAGCCACCCCCCTCCATCTGTTCCCAGCACCGGAGAAGGGGGTGCTCAGGTGGAGGTGTGGGGTATGCACCTGA  
GCTCCTGCTTCGCGCCTGCTGCTCTGCCCCAACGCGACCGCTGCCCGGCTGCCCAGAGGGCTGGATGCCTGCCGG  
TCCCCGAGCAAGCCTGGGAACTCAGGAAAATTCACAGGACTTGGGAGATTCTAAATCTTAAGTGCAATTATTTT  
AATAAAAGGGGCATTGGAATC



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**FIGURE 4995**

TCGGCAGCGGCACAGCGAGGTCGGCAGCGGCACAGCGAGGTCGGCAGCGGCACAGCGAGGTCGGCAGCGGCACAG  
CGAGGTCGGCAGCGGCAGCGAGGTCGGCAGCGGCACAGCGAGGTCGGCAGCGGCAGCGAGGTCGGCAGCGGCAGCG  
CGCTGTGCTCTTCCGCGGACTCTGAATCATGGCGACCACGGCCACGATGGCGACCTCGGGCTCGGCGCGAAAGCG  
GCTGCTCAAAGAGGAAGACATGACTAAAGTGGAATTCGAGACCAGCGAGGAGGTGGATGTGACCCCCACGTTCTGA  
CACCATGGGCCCTGCGGGAGGACCTGCTGCGGGGCATCTACGCTTACGGTTTTGAAAAACCATCAGCAATCCAGCA  
ACGAGCAATCAAGCAGATCATCAAAGGGAGAGATGTCATCGCACAGTCTCAGTCCGGCACAGGAAAAACAGCCAC  
CTTCAGTATCTCAGTCCCTCCAGTGTTTGGATATTAGGTTCTGTGAAACTCAAGCTTTGATCTTGGCTCCCAAG  
AGAGTTGGCTGTGCAGATCCAGAAGGGGCTGCTTGCTCTCGGTGACTACATGAATGTCCAGTGCCATGCCTGCAT  
TGGAGGCACCAATGTTGGCGAGGACATCAGGAAGCTGGATTACGGACAGCATGTTGTCGCGGGCACTCCAGGGCG  
TGTTTTTGATATGATTTCGTGCGAGAAGCCTAAGGACACGTGCTATCAAAATGTTGGTTTTGGATGAAGCTGATGA  
AATGTTGAATAAAGGTTTTCAAAGAGCAGATTTACGATGTATACAGGTACCTGCCTCCAGCCACACAGGTGGTTCT  
CATCAGTGCCACGCTGCCACACGAGATTCTGGAGATGACCAACAAGTTCATGACCGACCCAATCCGCATCTTGGT  
GAAACGTGATGAATTGACTCTGGAAGGCATCAAGCAATTTTTCTGTGGCAGTGGAGAGGGAAGAGTGGAATTTGA  
CACTCTGTGTGACCTCTACGACACACTGACCATCACTCAGGCGGTCTCTTCTGCAACACCAAAAGAAAGGTGGA  
CTGGCTGACGGAGAAAAATGAGGGAAGCCAACCTTCACTGTATCCTCAATGCATGGAGACATGCCCCAGAAAGAGCG  
GGAGTCCATCATGAAGGAGTTCCGGTCGGGCGCCAGCCGAGTGCTTATTTCTACAGATGTCTGGGCCAGGGGGTT  
GGATGTCCCTCAGGTGTCCCTCATTAACATGATCTCCCTAATAACAGAGAATTGTACATACAGAAATTGG  
GAGATCAGGTCGATACGGCCGAAGGGTGTGGCCATTAACCTTTGTAAAGAATGACGACATCCGCATCCTCAGAGA  
TATCGAGCAGTACTATTCCACTCAGATTGATGAGATGCCGATGAACGTTGCTGATCTTATCTGAAGCAGCAGATC  
AGTGGGATGAGGGAGACTGTTACCTGCTGTGTACTCTGTTTGAAGTATTTAGATCCAGATTCTACTTAATGG  
GGTTTATATGGACTTTCTTCTATAAATGGCCTGCCGTCTCCCTTCCTTTGAAGAGGATATGGGGATTCTGCTCT  
CTTTTCTTATTACATGTAAATAATACATTGTTCTAAGTCTTTTTTCATTAAAAATTTAAACTTTTCCCAT

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**FIGURE 4996A**

GACGGGCTGGGGAGGTGGTGCCAGGCTGGTTGCTAGCTGCCGCCGCTGCTCACC CGGCCGTCCGGCCGCTTCAT  
TGTCACCGGGCTCGGGGCAGTGTTGGGGGTGGCGGGGCGCCAGGTCGCCGACCGAGGTTTGGGCGCGACTGGT  
TCCGCATCCCCTCCC CGCGGCCGAATCTGCAGGCCCGCGGCCAGGCAGGCTTCGCGGCTGCGCCCCCGCCC  
GCGCAGGACCTGCCTTGTCACCAATGAAAGGCACCCGGGCCATCGGCAGCGTCCCGAGCGCACGCCAGCAGGTG  
TGGACCTGAGTCTGACAGGTCTCCCTCCGCCTGTGTCCCGGCGTCTTGGCAGTGCGCCACCACCAAGCCCATCGT  
CCGCTCTGTCTCCGTGGTTCACAGGCAGCGAGCAGAAGAGGAAGGTGCTGGAGGCCACAGGGCTGGGGGCTCCCA  
GGCCATCAACAACCTTAGGAGATCCAACAGCACCACGCAGGTGAGCCAGCCTCGGAGCGGCTCCCCAGGCCAAC  
GGAGCCACAGACTTCCTGATGCTCTTCGAGGGCAGCCCCAGTGGGAAAAAGAGGCTGCCAGCCTGAGCACAGC  
CCCCAGCGAGAAGGGAGCCACCTGGAACGTCTGGATGACCAGCCCCGGGGCTTACCTTGCCATCCAATGCCCG  
GAGTTCCAGTGCCCTTGACTACCCAGCGGGCCCGGGAGGAAAGAATGCACCGTGCCCTGGCCCCAACCTTCAC  
TGCTAACAACAGGAGCAACAAGGGAGCAGTGGGCAACTGCGTCACCACCATGGTGCACAACCGCTACCCCCCTC  
GGAGAGGGCGCCTCCGCTCAAGAGCTCCAACCAGACTGCCCCCTCCCTCAACAACATCATCAAGGCAGCCACCTG  
TGAGGGCAGTGAGAGCAGCGGCTTTGGGAAGCTGCCGAAGAATGTCTCCAGTGCCACCCACTCAGCCCGGAACAA  
TACTGGGGGCAGCACGGGCTTGCCAGGCGGAAGGAGGTGACGGAGGAGGAGGCTGAGAGGTTTATCCACCAGGT  
GAACCAGGCCACTGTCACCATCCAGCGTGGTACCGGCACCAGGTGCAGCGGCGCGGAGCAGGAGCTGCCCGCT  
GGAGCACTTGCTTCAGGCCAAGCGGGAGGAGCAGCGGCAGCGGTGAGGCGAGGGGACCCTCTTGACCTGCACCA  
GCAGAAAGAGGCAGCCAGGAGGAAGGCCCGGGAGGAGAAGGCACGCCAAGCCAGGCGAGCAGCCATTAGGAGCT  
GCAACAGAAACGAGCCCTGAGAGCCAGAAAGGCGAGCACTGCCGAGCGTGGGCCACCTGAGAATCCAGGGAGAC  
CAGAGTGCCAGGAATGCGGCAGCCTGCTCAGGAGCTGTCCCCACACCAGGCGGCACTGCCACCAGGCCCTCAA  
GGCCAAACAATACTGGTGGTGGCCTCCCTGCTGCAGGCCCGGAGACCGCTGCCTGCCACCTCCGACTCATCCCC  
AGAACCACAGCAGCCTCCAGAGGACAGGACGCAGGACGTTCTTGCCAGGATGCAGCTGGGGACAACCTGGAGAT  
GATGGCCCCGAGCAGGGGGAGCGCCAAGTCCAGGGGGCCACTGGAGGAGCTGCTGCACACACTGCAGCTGCTGGA  
GAAGGAGCCGGACGTGCTGCCCGCCCCAGGACCCATCACAGGGGCAGATACGCTGGGCCAGCGAGGTGACCAC  
GGAGGATGACGCCAGCTCTGTACAGCTGACAACCTGGAGAAATTTGGAAGTCAAGTGCCTTCCCCGAACCTCC  
TGAGGATGGGACGCTGCTATCGGAGGCCAAGCTACAAAGCATCATGAGCTTCTTGACGAGATGGAGAAGTCTGG  
GCAGGACCAGCTGGACTCCCAGCAGGAGGGGTGGGTGCCGAGGCGGGGCGGGCCCCCTGGAGCTGGGGTCCGA  
GGTGAGCACGTCTGTGATGCGGCTGAAGCTGGAGGTGGAGGAGAAGAAGCAGGCCATGCTGCTGCTGCAGAGAGC  
GCTGGCGCAGCAGCGAGACCTCACGGCCCGCGGGTCAAGGAGACAGAGAAGGCGCTGAGCCGCGAGCTGCAGCG  
GCAGAGGGAGCACTACGAGGCCACCATCCAGCGGCACTTGCCCTTATTGACCAGCTGATTGAGGACAAGAAGGT  
CCTGAGTGAAAAGTGCAGGCTGTGGTGGCCGAGCTGAAGCAGGAGGACCAGAGATGCACCGAGCGTGTGGCCCA  
GGCACAGGCGCAGCAGAGCTGGAGATTAAAAAACTCAAAGAATTAATGAGCGCCACCGAGAAAGCCCGCGGGA  
GAAGTGGATCAGTGAGAAAACCAAGAAGATCAAGGAGGTCACTGTCCGAGGTCTGGAGCCCGAGATCCAGAAGCT  
GATTGCAAGGCACAAGCAGGAAGTGCAGGAGCTCAAGAGCCTGCACGAGGCGGAGCTGCTGCAGTCGGATGAGCG  
GGCCTCGCAGCGCTGCCTGCGCCAGGCCGAGGAGCTGCGGGAGCAGCTGGAGCGGGAGAAGGAGCGCTGGGCCA  
GCAGGAGCGCGAACGTGCTCGGCAGCGGTTCCAGCAGCACCTGGAGCAGGAGCAGTGGGCGCTGCAGCAGCAACG  
GCAGCGGCTGTACAGTGAGGTGGCTGAGGAGAGGGAGCGGCTGGGCCAGCAGGCAGCCAGGCAGCGGGCGGAGCT  
GGAAGAGCTGAGGCAGCAGCTGGAGGAGAGCAGCTCTGCACTGACCCGAGCCCTGAGGGCTGAGTTTGAGAAGGG  
CAGGGAGGAGCAGGAGCGCCGGCACCAGATGGAGCTGAATACCCTGAAGCAGCAGCTGGAGCTGGAGAGGCAGGC  
GTGGGAGGCCCGCCGACCAGGAAGGAGGAGCGGTGGCTGCTGAACCGGGAACAGGAGCTGAGGGAAGAAATCCG  
GAAAGGCCGGGACAAGGAGATTGAGCTGGTCAATCACCGGCTGGAGGCCGACATGGCGCTGGCCAAGGAGGAGAG  
TGAGAAGGCTGCCGAGAGCCGCATCAAGCGCTTACGGGACAAGTACGAGGCCGAGCTCTCCGAGCTGGAGCAGTC  
GGAGCGGAAGCTTCAGGAGCGGTGCTCGGAGCTGAAGGGCCAGCTTGGGGAGGCCGAGGGCGAGAATCTGCGTCT  
GCAGGGCCTTGTCGGGCAGAAGGAGCGGGCGCTGGAGGATGCGCAGGCGGTGAACGAGCAGCTTCTAGCGAGCG  
CAGCAACCTGGCCCAGGTGATCCGCCAGGAGTTCGAGGACCGGCTGGCAGCCTCTGAGGAGGAGACGCGGCAGGC  
CAAGGCCGAGCTGGCCACGCTGCAGGCCCGCCAGCAGCTGGAGCTGGAGGAGGTGCACCGGAGGGTGAAGACAGC  
CCTCGCGAGGAAGGAGGAGGCCGTGAGCAGCCTCCGGACACAACATGAGGCTGCGGTGAAGCGGGCCGACCACCT  
GGAGGAGCTGCTGGAGCAGCACAGGAGGCCACGCCAAGTACCAAGTGACCAGGGATGCCGGGAACACTGTGCAA  
GAACGGAAGGCAGAGGACAGAGGCTGGACGTGGGCCAGAGGCCACAGGGACGCCACCTGCCCCCACAGAGG

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**FIGURE 4996B**

CTGGTGGTTGAGATGCCCCACGGCTAAGCACCTGTGGCTGCATTTTAAACAGTAAAGGAGGCCGTTGTTTTTC

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**FIGURE 4997**

MKGTRAGSVSPERSPAGVDLSLTGLPPVSRPFGSAATTKPIVRSVSVVTGSEQKRKVLEATGPGGSQAINNLR  
SNSTTQVSQPRSGSPRPTEPTDFLMLFEGSPSGKKRPASLSTAPSEKGATWNVLDDQPRGFTLPSNARSSSALDS  
PAGPRRKECTVALAPNFTANNRSNKGAVGNCVTTMVHNRYTPSERAPPLKSSNQTAAPSLNNIIKAATCEGSESSG  
FGKLPKNVSSATHSARNNTGGSTGLPRRKEVTEEEAERFIHQVNQATVTIQRWYRHQVQRRGAGAAARLEHLLQAK  
REEQRQSRGEGTLLDLHQQKEAARRKAREEKARQARRAAIQELQQKRALRAQKASTAERGPPENPRETRVPGMRQ  
PAQELSPTPGGTAHQALKANNTGGGLPAAGPGDRCLPTSDSSPEPQOPPEDRTQDVLAQDAAGDNLEMMAPSRGS  
AKSRGPLEELLHTLQLEKEPDVLP RPRTTHHRGRYAWASEVTTEDDASSLTADNLEKFGKLSAFPEPPEDGTLLS  
EAKLQSIMSFLDEMEKSGDQLDSQQEGWVPEAGPGPLELGSEVSTSMRLKLEVEKKQAMLLLQRALAQQRDL  
TARRVKETEKALSRQLQRQREHYEATIQRHLAFIDQLIEDKKVLSEKCEAVVAELKQEDQRCterVAQAQAQHEL  
EIKKLKELMSATEKARREKWISEKTKKIKEVTVRGLEPEIQKLIARHKQEVRLKSLHEAELLQSDERASQRCr  
QAEELREQLEREKEALGQQERERARQRFQQHLEQEQWALQQQRQRLYSEVAEERERLGQQAARQRAELEELRQQL  
EESSALTRALRAEFKGREEQERRHQMELNTLKQQLERQAWAAGTRKEEAWLLNREQELREETIRKGRDKEI  
ELVIHRLEADMALAKEESEKAAESRIKRLRDKYAELSELEQSERKLOERCSELKGQLGEAEGENLRLQGLVRQK  
ERALEDAQAVNEQLSSERSNLAQVIRQEFEDRLAASEEETRQAKAELATLQARQQLELEEVRHVKTALARKEEA  
VSSLRTQHEAAVKRADHLEELLEQHRRPTPSTK

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**FIGURE 4998**

CAGGTGAGGCGGAACCAACCCCTCCTGGCCATGGGAGGGGCCGTGGTGGACGAGGGCCCACAGGCGTCAAGGCCCT  
GACGGCGGCTGGGCGTGAGGCGTGCTCTTCGGCTGTTTCGTCATCACTGGCTTCTCCTACGCCTTCCCCAAGGCC  
GTCAGTGTCTTCTTCAAGGAGCTCATAAGGAGTTTGGGATCGGCTACAGCGACACAGCCTGGATCTCCTCCATC  
CTGCTGGCCATGCTCTACGGGACAGGTCCGCTCTGCAGTGTGTGCGTGAACCGCTTTGGCTGCCGGCCCGTCATG  
CTTGTGGGGGTCTCTTTGCGTCGCTGGGCATGGTGGCTGCGTCCTTTTGCCGGAGCATCATCCAGGTCTACCTC  
ACCACTGGGGTCATCACGGGGTTGGGTTTGGCACTCAACTTCCAGCCCTCGCTCATCATGCTGAACCGCTACTTC  
AGCAAGCGGCGCCCCATGGCCAACGGGCTGGCGGCAGCAGGTAGCCCTGTCTTCCTGTGTGCCCTGAGCCCGCTG  
GGGCAGCTGCTGCAGGACCGCTACGGCTGGCGGGGCGGCTTCCTCATCCTGGGCGGCCTGCTGCTCAACTGCTGC  
GTGTGTGCCGCACTCATGAGGCCCTGGTGGTCACGGCCCAGCCGGCTCGGGGCAGCCGCGACCCCTCCCGGCGCC  
TGCTAGACCTGAGCGTCTTCCGGGACCGCGGCTTTGTGCTTTACGCCGTGGCCGCTCGGTGTCATGGTGTGGGGC  
TCTTCGTCCCGCCCGTGTTCGTGGTGATGACGCCAAGGACCTGGCGTGCCCGACACCAAGGCGCCTTCTGTCTCA  
CCATCCTGGGCTTCATTGACATACTTACGCCCGCGGGGCTTCGTGCGGGGCTTGGGAAGGTGCGGCCCTATCCG

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**FIGURE 4999**

GC GGGCGGCGGCGCTCGGAGTCGCCGGGAGCTGCCAGGCTGCTCCGCGCGCCGCTGCGGGGCCATGATCCGGAAC  
GGGCGCGGGGCTGCAGGCGGCGCAGAGCAGCCGGGCCGGGGGCGAGGCGCGCCGTGAGGGTGTGGTGCGATGGC  
TGCTATGACATGGTGCATTACGGCCACTCCAACCAGCTGCCGCCAGGCACGGGCCATGGGTGACTACCTCATCGTA  
GGCGTGCACACCGATGAGGAGATCGCCAAGCACAAGGGGCCCGGTGTTCACTCAGGAGGAGAGATAACAAGATG  
GTGCAGGCCATCAAATGGGTGGACGAGGTGGTGCCAGCGGCTCCCTACGTCACTACACTAGAGACCTTGACAAA  
TACAACTGTGACTTCTGTGTTACGGCAATGACATCACCTGACTGTAGATGGCCGGGACACCTATGAGGAAGTA  
AAGCAGGCTGGGAGGTACAGAGAATGCAAGCGCACGCAAGGGGTGTCCACCACAGACCTCGTGGGCCGATGCTG  
CTGGTAACCAAAGCCCATCACAGCAGCCAGGAGATGTCTCTGAGTACCGGGAGTATGCAGACAGTTTTGGCAA  
TGCCCTGGTGGGCGGAACCCCTGGACCGGGGTATCCAGTTCCTGCAGACATCTCAGAAGATCATCCAGTTTGCT  
TCTGGGAAGGAGCCCCAGCCAGGGGAGACAGTCATCTATGTGGCTGGTGCCTTCGACCTGTTCCACATCGGGCAT  
GTGGACTTCCTGGAGAAGGTGCACAGGCTGGCAGAGAGGCCCTACATCATCGCGGGCTTACACTTTGACCAGGAG  
GTCAATCACTACAAGGGGAAGAACTACCCCATCATGAATCTGCATGAACGGACTCTGAGCGTGTGGCCTGCCGG  
TACGTGTGAGAAGTGGTGATTGGAGCCCCGTACGCGGTACAGCAGAGCTCCTAAGTCACTTCAAGGTGGACCTG  
GTGTGTACGGCAAGACAGAAATTATCCCTGACAGGGATGGCTCCGACCCATACCAGGAGCCCAAGAGAAGGGG  
ATCTTCCGTCAGATTGACAGTGGCAGCAACCATCACCAAAGACTCATCGTCAGCGGATTATCACAAACAXXXXXX  
XXXXXGAGGCGCTAAACGAGAAGAAGGAAGCCAAGGAGCTCGCCTTCCTGGAGGTGCCAGGCAGCAGGCGCACAG  
CCCTGGGAGCGCGATGGTACTTCTAACCTGGCAGAGCCCTGCCGGCCCTCCCTGCTCTGCTTCTGCGCCTTC  
TGCGTTTGGACATAGGACTCTGCAGGGCGCCCTCTCTAACTGGCCTGGCTCTGGAAGGGCTGGTGAGGACTCTG  
CCTCCTTGCTGCTTACAAGGTGCCTGGTTTGACGAGGCTCTCCGCTCTTTCCAGCAAAGCTGCTCAGAGAGGG  
TGTCCAGCACAGTGGAGAGGCCGGAAGTGAGACGGGCAGACGGCACCTGCAGCCTGAAACGCACCGCTCCTGCGT  
GCGCCCCACCTGGTCCCCGGATGCCCCCACCACCTGGACAGAGGCCACACTGACTGCCCACCCAGCTGTGGCGG  
GAGGTGCAGAGCAGAGGGCTTTAGGGAGCAGTGA CTGCGGTACCCCTTTAGTTCTCTGGGTGTAGACCACCA  
CCTCCCACTGGGCACCCCCAACACGGTGTCTGCCACCCAGCGCCTGGCTCCAGGAAAACACGCTTGCCTTCCT  
TCCCGGCAGCTTCGCCACTCTCCTTATGGACTCTGTTCTGTTTGTACATGGCTGACGGAATCTCTTTGGTACAA  
CCGAATAAAGCCTGGTGGCAGTGCTGCGCGGGGCTCCAGCC

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**FIGURE 5000**

TGACCTGACCTCTCTCCTCTCCCTCACCTCCTGCCCTGGCCACTGCAGGATCAGGAGGGGAGAAGAAGGAGC  
CTCTGCTGCCTCCCAGGCTGCTGGGACTGGGCTGGTTTTTGTCCTTGAAGTGGTCAGGATACAGGACAAGGGCAGC  
CCCACCCATCCAGCCTGGGCTCCCCGCAGACCCTTGCTGCTCCCGTGGCCTGGACA'CGCTGGGGAGCTTCTCAC  
ACCTACCCAGGCTGACCCTGAGGTGCTGCTGCTGGGCTGTGCTTGGCTCTGGGGTGTGCTGGGAGGGTCACCAG  
GTCCCTTTTCCTTCCTGTGCCCTCTGAAAGCTAAGTGTCTGTGTGGCTGTGGAGCTCGAGGGTCTGTGAATAAAG  
GCGGCGGCACTGGG

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**FIGURE 5001**

CCCCTACACACCGTCCGTTACCCCCGTCTCTTCCTTCTGCTTTTCGGTTTTTGGAAAGGGATCCATCTCCAGGC  
AGCCCACCCCTGGTGGGGCTTGTTTCCTGAAACCATGATGTACTTTTTTCATACATGAGTCTGTCCAGAGTGCTTGC  
TACCGTGTTCCGAGTCTCGCTGCCTCCCTCCCGCGGGAGGTTTCTCCTCTTTTGGAAAATTCCGTCTGTGGGATT  
TTTAGACATTTTTCGACATCAGGGGTGTCCCCCATGCCTGGAAGAGGAGCTGGTGGCTGCCAGCCCTGGGGCCCG  
GCACAGGCCTGGGCCTTCCCCTTCCCTCAAGCCAGGGCTCCTCCTGTCGTGGGCTCATTGTGACCACTGGCC  
TCTCTACAGCACGGCCTGTGGCCTGTTCAAGGCAGAACCAGACCCTTGACTCCCGGGTGGGGAGGTGGCCAAGG  
ATGCTGGAGCTGAATCAGACGCTGACAGTTCTTCAGGCATTCTATTTACAATCGAATTGAACACATTGGCCAA  
ATAAAGTTGAAATTTT



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**FIGURE 5002**

GGCACCAGGGGGCGGCCGACGACGTTTCGTCAATTTAGTGCGGGAGGGATCCTGAACCGCGCGGCCGAACCCTCCGG  
TGTCCTCCGACCCAGGCTAAGCTTGAGCATGGCTGAGCAGGAGCCACAGCCGAGCAGCTGGCCAGATTGCAGCGG  
AGAACGAGGAGGATGAGCACTCGGTCAACTACAAGCCCCGGCCAGAGAGCATCCAGGAGATCCAGGAGCTGG  
ACAAGGACGACGAGAGCCTGCGAAAGTACAAGGAGGCCCTGCTGGGCCGCGTGGCCGTTTCCGAGACCCCCAACG  
TCCCCAACGTCGTGGTGACTGGCCTGACCTGGTGTGACGCTCGGCCCGGGCCCCCTGGAGCTGGACCTGACGG  
GCGACCTGGAGAGCTTCAAGAAGCAGTCGTTTGTGCTGAAGGAGGGTGTGGAGTACCGGATAAAAAATCTCTTTCC  
GGGTTAACCAGAGAGATAGTGTCCGGCATGAAGTACATCCAGCATACTACAGGAAAGGCGTCAAGATTGACAAGA  
CTGACTACATGGTAGGCAGCTATGGGCCCGGGCCGAGGAGTACGAGTTCCTGACCCCCGTTGGAGGAGGCACCCA  
AGGGTATGCTGGCCCGGGGCGAGCTACAGCATCAAGTCCCGCTTACAGACGACGACAAGACCGACCACTGTCTT  
GGGAGTGGAATCTCACCATCAAGAAGGACTGGAAGGACTGAGCCCCAGCCAGAGGCGGGCAGGGCAGACTGACGGA  
CGGACGACGACAGGCGGATGTGTCCCCCAGCCCCCTCCCCTCCCCATACCAAAGTGTGACAGGCCCTCCGTG  
CCCCCCCCACCTGGTCCGCTCCCTGGCCTGGCTCAACCGAGTGCCTCCGACCCCCCTCCTCAGCCCTCCCCCA  
CCCACAGGCCAGCCTCCTCGGTCTCCTGTCTCGTTGCTGCTTCTGCCTGTGCTGTGGGGGAGAGAGGCCGAGC  
CAGGCCTCTGCTGCCCTTTCTGTGCCCCCAGGTTCTATCTCCCCGTACACCCGAGGCCTGGCTTCAGGAGGGA  
GCGGAGCAGCCATTCTCCAGGCCCGTGGTTGCCCCCTGGACGTGTGCGTCTGCTGCTCCGGGGTGGAGCTGGGGT  
GTGGGATGCACGGCCTCGTGGGGGCGGGCCGTCTCCAGCCCCGCTGCTCCCTGGCCAGCCCCCTTGTGCTGT  
CGGTCCCGTCTAACCATGATGCCTTAACATGTGGAGTGTACCGTGGGGCCTCACTAGCCTCTAACTCCCTGTGTC  
TGCTGAGCATGTGGCTCCCCGTCCCTTCCCCGGTGGCGAAGCCAGTGACCCAGGGACACGTGGGGTGTGCTGC  
TGCTGCTCCCAGCCCCACAGTGCCTGGCCAGCCTGCCCCCTTCCCTGGACAGGGCTGTGGAGATGGCTCCGGCG  
GCTTGGGGAAAGCCAAATTGCCAAAACCTCAAGTACCTCAGTACCATCCAGGAGGCTGGGTATTGTCTGCCTCT  
GCCTTTTCTGTCTCAGCGGGCAGTGCCAGAGCCACACCCCCCAAGAGCCCTCGATGGACAGCCTCACCCACC  
CCACCTGGGCCAGCCAGGAGCCCCGCCTGGCCATCAGTATTTATTGCCTCCGTCCGTGCCGTCCCTGGGCCACT  
GGCCTGGCGCCTGTTCCCCCAGGCTCTCAGTGCCACCACCCCCGGCAGGCCTTCCCTGACCCAGCCAGGAACAAA  
CAAGGGACCAAGTGACACATTGCTGAGAGCCGTCTCCTGTGCCTCCCCGCCCCATCCCCGGTCTTCGTGTTGT  
GTCTGCCAGGCTCAGGCAGAGGCGCCTGTCCCTGCTTCTTTCTGACCGGGAATAAATGCCCTGAAGGAAAAA  
AAA

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**FIGURE 5003**

MAEQEPTAEQLAQIAAENEDEHSVNYKPPAQKSIQEIQELDKDDESLRKYKEALLGRVAVSADPNVPNVVVTGL  
TLVCSSAPGPLELDTGDLESFKKQSFVLKEGVEYRIKISFRVNREIVSGMKYIQHTYRKGVKIDKTDYMGVGSYG  
PRAEYEFLLTPVEEAPKGMLARGSYSIKSRFTDDDKTDHLSWEWNLTIKKDWKD

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**FIGURE 5004**

CTCCGGACAGCATGAGCGTGGGCTTCATCGGCGCTGGCCAGCTGGCTTTTGCCCTGGCCAAGGCTTTCACAGCAG  
CAGGCGTCTTGGCTGCCCCACAAGATAATGGCTAGCTCCCCAGACATGGACCTGGCCACAGTTTCTGCTCTCAGGA  
AGATGGGGGTGAAGTTGACACCCCAACAAGGAGACGGTGCAGCACAGTGATGTGCTCTTCTGGCTGTGAAGC  
CACACATCATCCCTTTCATCCTGGATGAAATAGGCGCCGACATTGAGGACAGACACATTGTGGTGTCTGCGCGG  
CCGGCGTCACCATCAGCTCCATTGAGAAGAAGCTGTCAGCGTTTTCGGCCAGCCCCAGGGTCATCCGCTGCATGA  
CCAACACTCCAGTCCGTGGTGCAGGAGGGGGCCACCGTGTATGCCACAGGACGCACGCCAGGTGGAGGACGGGAG  
GCTC**ATGGAG**CAGCTGCTGAGCAGCGTGGGCTTCTGCACGGAGGTGGAAGAGGACCTGATTGATGCCGTACGGG  
GCTCAGTGGCAGCGCCCCCGCTACGCATTACAGCCCTGGATGCCCTGGCTGATGGGGGTGTGAAGATGGGACT  
TCCAAGGCGCTGGCAGTCCGCTCGGGGCCAGGCCCTCTGGGGGTGCCAAGATGCTGCTGCACTCAGAACA  
GCACCCAGGCCAGCTCAAGGACAACGTCAGCTCTCTGGTGGGGCCACCATCCATGCCTTGCATGTGCTGGAGAG  
TGGGGGCTTCCGCTCCCTGCTCATCAACGCTGTGGAGGCTCTCTGCATCCGCACACGGGAGCTGCAGTCCATGGC  
TGACCAGGAGCAGGTGTACCAGCCGCCATCAAGAAGACCATCCTGGACAAGGTGAAGCTGGACTCCCCTGCAGG  
GACCGCTCTGTACCTTCTGGCCACACCAAGCTGCTCCCCCGCAGCCTGGCCCCAGCGGGCAAGGAT**TGAC**CACGT  
CCTGCCTGACCACCATCCTGCCACCACCTTCTCTTCTTGTCACTAGGGGGACTAGGGGGTCCCCAAAGTGGCC  
CACTTTCTGTGGCTCTGATCAGCGCAGGGGCCAGCCAGGGACATAGCCAGGGAGGGGCCACATCACTTCCCACTG  
GAAATCTCTGTGGTCTGCAAGTGCTTCCCAGCCCAGAACAGGGGTGGATTCCCCAACCTCAACCTCCTTTCTTCT  
CTGCTCCCCAAACCATGTCAGGACCACCTTCTCTAGAGCTCGGGAGCCCGGAGGGTCTTACCCCACTCCTACTCC  
AGTATCAGCTGGCACGGGCTCCTTCCCTGAGAGCAAAGGTCAAGGACCCCTCTGTGAAGGCTCAGCAGAGGTGGG  
ATCCACGCCCCCTCCCGGCCCTCCCTGCCCTCCATTACAGGGAGAAACCTCTCCTTCCCGTGTGAGAAGGGCCA  
GAGGGTCCAGGCATCCCAAGTCCAGCGTGAAGGGCCACAGCCCCTCTTGGCTGCCAAGCACGCAGATCCCATGGA  
CATTGGGGAAAGGGCTCCTTGGGCTGCTGGTGAACCTCTGTGGCCACCACCTCCTGCTCCTGACCTCCCTGGGA  
GGGTGCTATCAGTTCTGTCTGGCCCTTTCAGTTTTATAAGTTGGTTTCCAGCCCCAGTGTCTGACTTCTGTCTC  
TGCCACATGAGGAGGGAGGCCCTGCCTGTGTGGGAGGGTGGTTACTGTGGGTGGAATAGTGGAGGCCTTCAACTG  
ATTAGACAAGGCCCGCCACATCTTGGAGGGCATCTGCCTTACTGATTAAATGTCAATGTAATCT

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**FIGURE 5005**

MEQLSSVGFCTEVEEDLIDAVTGLSGSPAYAFTALDALADGGVKMGLPRRLAVRLGAQALLGAAKMLLHSEQH  
PGQLKDNVSSPGGATIHVLESGGFRSLLINAVEASCIRTRELQSMADQEQVSPAIAIKKTILDKVKLDSPAGT  
ALSPSGHTKLLPRSLAPAGKD

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**FIGURE 5006**

GACATGGAGCTGTTCTCGCGGGCCGCCGGGTGCTGGTCACCGGGGCAGGCAAAGGTATAGGGCGCGGCACGGTC  
CAGGCGCTGCACGCGACGGGCGCGGGTGGTGGCTGTGAGCCGGACTCAGGCGGATCTTGACAGCCTTGTCGCG  
GAGTGCCCGGGGATAGAACCCGTGTGCGTGGACCTGGGTGACTGGGAGGCCACCGAGCGGGCGCTGGGCAGCGTG  
GGCCCCGTGGACCTGCTGGTGAACAACGCCGCTGTGCCCCCTGCTGCAGCCCTTCCTGGAGGTACCAAGGAGGCC  
TTTGACAGATCCTTTGAGGTGAACCTGCGTGCGGTCATCCAGGTGTCGCAGATTGTGGCCAGGGGCTTAATAGCC  
CGGGGAGTCCCAGGGGCCATCGTGAATGTCTCCAGCCAGTGCTCCCAGCGGGCAGTAACCTAACCATAGCGTCTAC  
TGCTCCACCAAGGGTGCCCTGGACATGCTGACCAAGGTGATGGCCCTAGAGCTCGGGCCCCACAAGATCCGAGTG  
AATGCAGTAAACCCACAGTGGTGATGACGTCCATGGGCCAGGCCACCTGGAGTGACCCCCACAAGGCCAAGACT  
ATGCTGAACCGAATCCCACTTGGCAAGTTTGCTGAGGTAGAGCACGTGGTGAACGCCATCCTCTTTCTGCTGAGT  
GACCGAAGTGGCATGACCACGGGTTCCACTTTGCCGGTGGAAGGGGGCTTCTGGGCCTGCTGAGCTCCCTCCACA  
CACCTCAAGCCCCATGCCGTGCTCATCCTACCCCCAATCCCTCCAATAAACCTGATTCTGCTGCCCAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5007**

MELFLAGRRVLVTGAGKGIGRTVQALHATGARVVAVSRTQADLDSLRECPGIEPVCVDLGDWEATERALGSVG  
PVDLLVNNAAVALLQPFLEVTKEAFDRSFEVNLRAVIQVSQIVARGLIARGVPGAIVNVSSQCSQRAVTNHSVYC  
STKGALDMLTKVMALELGPHKIRVNAVNPVVM TSMGQATWSDPHKAKTMLNRIPLGKFAEVEHVVNAILFLLSD  
RSGMITTGSTLPVEGGFWAC

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**FIGURE 5008**

TCTCTGAAGTTCCAGAATCCATGGAAGTGGACGGCAGCCGCGGGGTGGGTGCAAGATGCCGCTGCCGGTTT  
AGGTGTTTAACTTGCAGGGGGCCGTGGAGCCCATGCAGATCGACGTGGACCCCCAGGAAGACCCGCAGAATGCAC  
CTGACGTCAACTACGTGGTGGAGAACCCAGCCTGGATCTGGAACAGTACGCGGCCAGCTACAGCGGCCTGATGC  
GCATCGAACGGCTGCAGTTTATTGCTGATCACTGCCCCACGCTGCGGGTGGAGGCCCTGAAGATGGCCCTCTCCT  
TCGTGCAGAGAACCTTTAAGCTGGACATGTACGAGGAGATCCACCGCAAGCTCTCAGAGGCCACCAGGGAGCTGC  
AGAACGCACCCGACGCCATCCCTGAGAGCGGCGTGGAGCCCCAGCCCTGGACACGGCCTGGGTGGAGGCCACGC  
GGAAGAAGCGCTGCTGAAGCTGGAGAAGCTGGACACAGACCTGAAGAATAAGGGCAACTCCATCAAAGAGA  
GCATCCGCGCGGCCACGACGACCTGGGCGACCACTACCTGGACTGTGGGGACCTCAGCAACGCCCTCAAGTGCT  
ATTCCCGGGCCCGGGACTACTGCACCAGCGCCAAACACGTCTCAACATGTGCCCTCAATGTATCAAGGTCAGCG  
TCTACTTGCAGAATTGGTCTCATGTGCTCAGTACGTACGCAAGGCTGAGTCCACCCAGAGATTGCCGAGCAGC  
GAGGAGAGCGTGACAGCCAGACCCAGGCCATCCTCACCAGCTCAAGTGTGCCGAGGCTTGGCAGAGCTGGCCG  
CCAGGAAGTACAAGCAGGCTGCCAAGTGCCCTCCTGCTGGCTTCCTTTGATCACTGTGACTTCCCTGAGCTGCTGT  
CCCCAGCAACGTGGCCATCTACGGTGGCCTGTGCGCCTTGGCTACCTTTGACCGGCAGGAGCTGCAGCGCAATG  
TCATCTCCAGCAGCTCCTTCAAGTTGTTCTTGGAGCTGGAGCCACAGGTCCGAGACATCATCTTCAAATTCTACG  
AGTCCAAGTACGCCTCATGTCTCAAGATGCTGGACGAGATGAAGGACAACCTGCTCCTGGACATGTATCTGGCCC  
CCCATGTCAAGACCTGTACACCCAGATTGCAACCGTGCCCTCATCCAGTATTTAGCCCCCTACGTGTCAGCCG  
ACATGCATAGGATGGCGGCAGCCTTCAATACCACGGTGGCCGCCCTGGAGGACGAGCTGACGCAGCTAATCCTGG  
AGGGGCTGATCAGTGCCCGTGTGGACTCACACAGCAAGATCCTATACGCCCCGGGACGTGGATCAGCGCAGCACC  
CCTTTGAGAAGTCTCTGTTGATGGGCAAGGAGTTCCAGCGCCGCGCCAAGGCCATGATGCTGCGGGCAGCTGTGC  
TCCGCAACCAGATCCATGTCAAGTCCCCGCCAGAGAAGGGAGCCAGGGGGAGCTGACTCCAGCCAACAGCCAGT  
CCCGGATGAGCACCAACATGTGAGGGGTGAACCTTGGCCTCCAGGACATCTGCACCCCTCCCCACCTCCACGGA  
CCTCGGACCTCCAGGCGGCTCAGTGCTGCCTGCGGCCAGCTAAGGGGCTGGCCACTGGGTGCCACCCAGCCTG  
TGTGCCCTCCCTGGGGCTGAGGAGGCAGGCGGCTGCTAGTTGTGGCCCTTCCTGGAAGGAGAGGCTGCAGGGCT  
CGACCTGTGGGTTTCTGTCCCCAGGGAGCAGACTGTGCGGCACCCAGGCCAGTGGCACCATTTCAGACCCC  
TCCTGTTCCCGCTCAGTCAGGTGCAGACAAGTGGGCGGTGTCCATTAAAGAGCAGACTCAGCGTT

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**FIGURE 5009**

MEVDGTPRRGGCKMPLPVQVFNLQGAVEPMQIDVDPQEDPQNAPDVNYVVENPSLDLEQYAASYSGLMRIERLQF  
IADHCPILRVEALKMALS FVQRTFNVDMYEEIHRKLSEATRELQNAPDAIPESGVEPPALDTAWVEATRKKALLK  
LEKLDTDLKNYKGNSIKESIRRGHDDLGDHYLDCGDLNALKCYSRARDYCTSAKHVINMCLNVIKVSVYLNWS  
HVLSYVSKAESTPEIAEQRGERDSQTQAILTKLKCAAGLAELAARKYQAAKCLLLASFDHCDFPPELLSPSNVAI  
YGGLCALATFDRQELQRNVISSSSFKLFLELEPQVRDIIFKFYESKYASCLKMLDEMKNLLLDMYLAPHVRTLY  
TQIRNRALIQYFSPYVSADMRMAAAFNTTVALEDELTQLILEGLISARVDSHSHKILYARDVDQRSTTFEKSLL  
MGKEFQRRAKAMMLRAAVLRNQIHVKSPPREGSQGELTPANSQSRMSTNM



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**FIGURE 5010A**

ACGGCAGCGGCCCCGGCCTCCCTCTCCGCCGCGCTTCAGCCTCCCGCTCCGCCGCGCTCCAGCCTCGCTCTCCGG  
CGCCCCGACCGCCGCGCCCGCCCTCACCAGAGCAGCCATGGAGGAGGTGGTATTGCCGGCATGTCCGGGAAGCT  
GCCAGAGTCGGAGAAGTTGACAGGAGTTCTGGGACAACCTCATCGGCGGTGTGGACATGGTCACGGACGATGACCG  
TCGCTGGAAGGCGGCTCTACGGCCTGCCCGGCGGTCCGGCAAGCTGAAGGACCTGTCTAGGTTTGATGCCTCCT  
TCTTCGGAGTCCACCCCAAGCAGGCACACAGATGGACCCTCAGCTGCGGCTGCTGCTGGAAGTACCTATGAAG  
CCATCGTGGACGGAGGCATCAACCCAGATTCACTCCGAGGAACACACACTGGCGTCTGGGTGGCGTGAGCGGCT  
CTGAGACCTCGGAGGCCCTGAGCCGAGACCCCGAGACACTCGTGGGCTACAGCATGGTGGGCTGCCAGCGAGCGA  
TGATGGCCAACCGGCTCTCCTTCTTCTTCGACTTCAGAGGGCCAGCATCGCACTGGACACAGCCTGCTCCTCCA  
GCCTGATGGCCCTGCAGAACGCCTACCAGGCCATCCACAGCGGGCAGTGCCCTGCCGCCATCGTGGGGGGCATCA  
ATGTCCTGCTGAAGCCCAACACCTCCGTGCAGTTCTTGAGGCTGGGGATGCTCAGCCCCGAGGGCACCTGCAAGG  
CCTTCGACACAGCGGGGAATGGGTACTGCCCTCGGAGGGTGTGGTGGCCGCTCTGCTGACCAAGAAGTCCCTGG  
CCCGGCGGGTGTACGCCACCATCCTGAACGCCGCGCACCAATACAGATGGCTTCAAGGAGCAAGGCGTGACCTTCC  
CCTCAGGGGATATCCAGGAGCAGCTCATCCGCTCGTTGTACCAGTCGGCCGAGTGCGCCCTGAGTCATTTGAAT  
ACATCGAAGCCACGGCACAGGCACCAAGGTGGGCGACCCCGAGGAGCTGAATGGCATCACCCGAGCCCTGTGCG  
CCACCCGCCAGGAGCGCTGCTCATCGGCTCCACCAAGTCCAACATGGGGCACCCGGAGCCAGCCTCGGGGCTGG  
CAGCCCTGGCCAAGGTGCTGCTGTCCCTGGAGCACGGGCTCTGGGCCCCAACCTGCACTTCCATAGCCCCAAC  
CTGAGATCCAGCGCTGTTGGATGGGCGGCTGCAGGTGGTGGACAGCCCTGCCCGTCCGTGGCGGCAACGTGG  
GCATCAACTCCTTTGGCTTCGGGGGCTCCAACGTGCACATCATCTGAGGCCAACACGCAGCCGCCCCCGCAC  
CCGCCCCACATGCCACCTGCCCGTCTGCTGCGGGCCAGCGGACGACCCCTGAGGCGGTGCAGAAGCTGCTGG  
AGCAGGGCCTCCGGCACAGCCAGGACCTGGCTTCTTGAGCATGCTGAACGACATCGCGGCTGTCCCGCCACCG  
CCATGCCCTTCCGTGGCTACGCTGTGCTGGGTGGTGAGCGGCTGGCCAGAGGTGCAGCAGGTGCCGCTGGCG  
AGCGCCGCTCTGGTTCTGCTCTGGGATGGGCACACAGTGGCGCGGATGGGGCTGAGCCTCATGCGCCTGG  
ACCGCTTCCGAGATTCCATCTACGCTCCGATGAGGCTGTGAAGCCATTGCGCCTGAAGGTGTCACAGCTGCTGC  
TGAGCACAGACGAGAGCACCTTTGATGACATCGTCCATTGTTTGTGAGCCTGACTGCCATCCAGATAGGCCTCA  
TAGACCTGCTGAGCTGCATGGGGCTGAGGCCAGATGGCATCGTCGGCCACTCCCTGGGGGAGGTGGCCTGTGGCT  
ACGCCGACGGCTGCCTGTCCAGGAGGAGGCGCTCTCGCTGCCTACTGGAGGGGACAGTGCATCAAAGAAGCCC  
ATCTCCCGCCGGGCGCCATGGCAGCCGTGGGCTTGTCTGGGAGGAGTGTAACAGCGCTGCCCCCGGGCGTGG  
TGCCCGCCTGCCACAACCTCCAAGGACACAGTCACCATCTCGGGACCTCAGGCCCGGTGTTTGAGTTCGTGGAGC  
AGCTGAGGAAGGAGGTGTGTTTGCCAAGGAGGTGCGGACCGCGGTATGGCCTTCCACTCCTACTTTCATGGAGG  
CCATCGCACCCCCACTGCTGCAGGAGCTCAAGAAGGTGATCCGGGAGCCGAAGCCACGTTACGCCCGCTGGCTCA  
GCACCTCTATCCCCGAGGCCAGTGGCACAGCAGCCTGGCACGACGTCCTCCGCCGAGTACAATGTCAACAACC  
TGGTGAGCCCTGTGCTGTTCCAGGAGGCCCTGTGGCACGTGCCCTGAGCACGCGGTGGTGTGAGATCGCGCCCC  
ACGCCCTGCTGCAGGCTGTCTGAAGCGTGGCCTGAAGCCGAGCTGCACCATCATCCCCCTGATGAAGAAGGATC  
ACAGGGACAACCTGGAGTTCTTCTGGCCGGCATCGGCAGGCTGCACCTCTCAGGCATCGACGCCAACCCCAATG  
CCTTGTTCCACCTGTGGAGTTCCAGCTCCCGAGGAAGTCCCTCATCTCCCCACTCATCAAGTGGGACCACA  
GCCTGGCCTGGGACGTGCCGCGCGGAGGACTTCCCCAACGGTTCAGGTTCCCCCTCAGCCGCCATCTACAACA  
TCGACACCAGCTCCGAGTCTCTGACCACTACCTGGTGGACCACACCCCTCGACGGTCGCGTCTCTTCCCCGCCA  
CTGGCTACCTGAGCATAGTGTGAAGACGCTGGCCCGCGCCCTGGGCTGGGCGTCGAGCAGCTGCCTGTGGTGT  
TTGAGGATGTGGTGTGTCACACAGGCCACCATCTGCCCAAGACTGGGACAGTGTCCCTGGAGGTACGGCTCCTGG  
AGGCCTCCCGTGCCTTCGAGGTGTGAGAGAACGGCAACCTGGTAGTGAGTGGGAAGGTGTACCAAGTGGGATGACC  
CTGACCCAGGCTCTTCGACACCCGGAAGCCCCACCCCAACCCACGGAGCCCTCTTCTGGCCAGGCTG  
AAGTTTACAAGGAGCTGCGTGTGCTGAGTACGACTACGGCCCTCATTTCCAGGGCATCCTGGAGGCCAGCCTGG  
AAGGTGACTCGGGGAGGCTGCTGTGGAAGGATAACTGGGTGAGCTTCATGGACACCATGCTGCAGATGTCCATCC  
TGGGCTCGGCCAAGCACGGCCTGTACCTGCCCACCCGTGTACCGCCATCCACATCGACCCCTGCCACCCACAGGC  
AGAAGCTGTACACACTGCAGGACAAGGCCAAGTGGCTGACGTGGTGGTGGAGGAGGTGGCTGAGGGTACAGTGG  
CCGGAGGCGTCCACATCTCCGGGCTCCACACTGAGTCGGCCCCGCGCGGCAGCAGGAGCAGAGGTGCCCATCC  
TGGAGAAGTTTTGCTTCACTCCCCACACGGAGGAGGGGTGCCTGTCTGAGCGCGCTGCCCTGCAGGAGGAGCTGC  
AACTGTGCAAGGGGCTGGTGCAGGCACTGCAGACCAAGGTGACCCAGCAGGGGCTGAAGATGGTGGTGGCCGGAC

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**FIGURE 5010B**

TGGATGGGGCCCAGATCCCCGGGACCCCTCACAGCAGGAACTGCCCCGGCTGTTGTGCGGCTGCCTGCAGGCTTC  
AGCTCAACGGGAACCTGCAGCTGGAGCTGGCGCAGGTGCTGGCCCCAGGAGAGGCCCAAGCTGCCAGAGGACCCCTC  
TGCTCAGCGGCCTCCTGGACTCCCCGGCACTCAAGGCCTGCCTGGACACTGCCGTGGAGAACATGCCAGCCTGA  
AGATGAAGGTGGTGGAGGTGCTGGCTGGCCACGGTCACCTGTATTCCCGCATCCCAGGCCTGCTCAGCCCCCATC  
CCCTGCTGCAGCTGAGCTACACGGCCACCGACCGCCACCCCAAGGCCCTGGAGGCTGCCAGGCCGAGCTGCAGC  
AGCACGACGTTGCCAGGGCCAGTGGGATCCCGCAGACCCTGCCCCAGCGCCCTGGGAGCGCCGACCTCTTGG  
TGTGCAACTGTGCTGTGGCTGCCCTCGGGGACCCGGCCTCAGCTCTCAGCAACATGGTGGCTGCCCTGAGAGAAG  
GGGGCTTTCTGCTCCTGCACACACTGCTCCGGGGGACCCCTCGGGGACATCGTGGCCTTCTCACCTCCACTG  
AGCCGAGTATGGCCAGGGCATCCTGAGCCAGGACGCGTGGGAGAGCCTCTTCTCCAGGGTGTGCTGCGCCTGG  
TGGGCTGAAGAAGTCTTCTACGGCTCCACGCTCTTCTGTGCGCGCGGCCACCCCGCAGGACAGCCCCATCT  
TCTGCGGGTGGACGATACCAGCTTCCGCTGGGTGGAGTCTCTGAAGGGCATCCTGGCTGACGAAGACTCTTCCC  
GGCCTGTGTGGCTGAAGGCCATCAACTGTGCCACCTCGGGCGTGGTGGGCTTGGTGAAGTGTCTCCGCGGAGAGC  
CCGGCGGGAACCGCCTCCGGTGTGTGCTGCTCTCAACCTCAGCAGCACCTCCACGTCCCGGAGGTGGACCCGG  
GCTCCGCAGAACTGCAGAAGGTGTTGCAGGGAGACCTGGTGTGAACGTCTACCGCGACGGGGCTGGGGGGCTT  
TCCGCCACTTCTGCTGGAGGAGGACAAGCCTGAGGAGCCGACGGCACATGCCCTTGTGAGCACCTCACCCGGG  
GGGACCTGTCTCCATCCGCTGGGTCTGCTCCTCGCTGCGCCATGCCAGCCACCTGCCCTGGCGCCAGCTCT  
GCACGGTCTACTACGCCTCCCTCAACTTCCGCGACATCATGCTGGCCACTGGCAAGCTGTCCCTGATGCCATCC  
CAGGGAAGTGGACCTCCCAGGACAGCCTGTAGGTATGGAGTTCTCGGGCCGAGACGCCAGCGGCAAGCGTGTGA  
TGGGACTGGTGCCTGCCAAGGGCCTGGCCACCTCTGTCTGTGTACCGGACTTCTCTGGGATGTGCTTCCA  
ACTGGACGCTGGAGGAGCGGCCTCGGTGCTGTGCTGTACAGCACGGCCTACTACGCGCTGGTGGTGGTGGG  
GGGTGCGCCCCGGGAGACGCTGCTCATCCACTCGGGCTCGGGCGGCGTGGGCCAGGCCCATCGCCATCGCCC  
TCAGTCTGGGCTGCCGCTCTTACCACCGTGGGGTGGCTGAGAAGCGGGCGTACCTCCAGGCCAGGTTCCCC  
AGCTCGACAGCACAGCTTCGCCAACTCCCGGACACATCCTTCGAGCAGCATGTGCTGTGGCACACGGGCGGGA  
AGGGCGTTGACCTGGTCTTGAATCCTTGGCGGAAGAGAAGCTGCAGGCCAGCGTGAGGTGCTTGGCTACGCACG  
GTGCTTCTTGGAAATTGGCAAATTGACCTTCTCAGAACCACCCGCTCGGCATGGCTATCTTCTGAAGAAGC  
TGACATTCCACGGGGTCTTACTGGATGCGTTCTTCAACGAGAGCAGTGTGCTGACTGGCGGGAGGTGTGGGCGCTTG  
TGCAGGCCGCGCATCCGGATGGGGTGGTACGGCCCTCAAGTGCACGGTGTTCATGGGGCCAGGTGGAGGACG  
CCTTCCGCTACATGGCCCAAGGGAAGCACATTGGCAAAGTCGTGTCAGGTGCTTGGGAGGAGCCGGAGGCAG  
TGCTGAAGGGGGCCAAACCAAGCTGATGTGCGCCATCTCCAAGACCTTCTGCCCCGCCCAAGAGCTACATCA  
TCGCTGGTGGTCTGGGTGGCTTCGGCTGGAGTTGGCGCAGTGGCTGATACAGCGTGGGGTGCAGAAGCTCGTGT  
TGACTTCTCGCTCCGGGATCCGGACAGGCTACCAGGCCAAGCAGGTCCGCCGCTGGAGGCGCCAGGGCGTACAGG  
TGCAGGTGTCCACCAGCAACATCAGCTCACTGGAGGGGGCCCGGGGCTCATTGCCAGGCGGCGCAGCTTGGGC  
CCGTGGGCGGCGTCTTCAACCTGGCCGTGGTCTTGAGAGATGGCTTGTGAGAGAACCAGACCCAGAGTTCTTCC  
AGGACGTCTGCAAGCCCAAGTACAGCGGCACCCTGAACCTGGACAGGGTGACCCGAGAGGCGTGCCTGAGCTGG  
ACTACTTTGTGGTCTTCTCCTCTGTGAGCTGCGGGCGTGGCAATGCGGGACAGAGCAACTACGGCTTGGCAATT  
CCGCCATGGAGCGTATCTGTGAGAAACGCCGCGACGAAGGCCTCCAGGCCTGGCCGTGCAGTGGGGCGCCATCG  
GCGACGTGGGCATTTTGGTGGAGACGATGAGCACCACGACACGATCGTCAGTGGCAGCTGCCCCAGCGCATGG  
CGTCTGCCTGGAGGTGCTGGACCTCTTCTGAACCAGCCCCACATGGTCTGAGCAGCTTTGTGCTGGCTGAGA  
AGGCTGCGGCCTATAGGGACAGGGACAGCCAGCGGGACCTGGTGGAGGCGGTGGCAGACATCCTGGGCATCCGCG  
ACTTGGCTGTGTCAACCTGGACAGCTCACTGGCGGACCTGGGCTGGACTCGCTCATGAGCGTGGAGGTGCGCC  
AGACGCTGGAGCGTGAGCTCAACCTGGTGTGTCCGTGCGCGAGGTGCGGCAACTCACGCTCCGGAAGTGCAGG  
AGCTGTCTCAAAGGCGGATGAGGCCAGCGAGCTGGCATGCCCCACGCCCAAGGAGGATGGTCTGGCCCAGCAGC  
AGACTCAGCTGAACCTGCGCTCCCTGCTGGTGAACCCGAGGGCCCCACCCTGATGCGGCTCAACTCCGTGCAGA  
GCTCGGAGCGGCCCCCTGTTCTTGGTGCACCCAATCGAGGGCTCCACCACCGTGTTCACAGCCTGGCCTCCCGGC  
TCAGCATCCCCACCTATGGCCTGCAGTGCACCCGAGCTGCGCCCTTGACAGCATCCACAGCCTGGCTGCCTACT  
ACATCGACTGCATCAGGCAGGTGCAGCCCCAGGGCCCCCTACCGCTGGCCGGCTACTCCTACGGGGCTGCGTGG  
CCTTTGAAATGTCTCCAGCTGCAGGCCAGCAGAGCCAGCCCCACCCACAACAGCCTCTTCTGTTCGACG  
GCTCGCCACCTACGTACTGGCCTACACCCAGAGCTACCGGGCAAAGCTGACCCAGGCTGTGAGGCTGAGGCTG

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**FIGURE 5010C**

AGACGGAGGCCATATGCTTCTTCGTGCAGCAGTTCACGGACATGGAGCACAACAGGGTGCTGGAGGCGCTGCTGC  
CGCTGAAGGGCCTAGAGGAGCGTGTGGCAGCCGCCGTGGACCTGATCATCAAGAGCCACCAGGGCCTGGACCGCC  
AGGAGCTGAGCTTTGCGGCCCCGGTCTTCTACTACAAGCTGCGTGCCGCTGAGCAGTACACACCCAAGGCCAAGT  
ACCATGGCAACGTGATGCTACTGCGCGCCAAGACGGGTGGCGCCTACGGCGAGGACCTGGGCGCGGACTACAACC  
TCTCCCAGGTATGCGACGGGAAAGTATCCGTCCACGTCATCGAGGGTGACCACCGCACGCTGCTGGAGGGCAGCG  
GCCTGGAGTCCATCATCAGCATCATCCACAGCTCCCTGGCTGAGCCACGCGTGAGCGTGCGGGAGGGCTAGGCCC  
GTGCCCCCGCCTGCCACCGGAGGTCACTCCACCATCCCCACCCACCCACCCACCCCGCCATGCAACGGGAT  
TGAAGGGTCTGCGGGTGGGACCCTGTCCGGCCCCAGTGCCACTGCCCCCGAGGCTGCTAGATGTAGGTGTTAGG  
CATGTCCACCCACCCGCCGCTCCACGGCACCTCGGGGACACCAGAGCTGCCGACTTGGAGACTCCTGGTCTG  
TGAAGAGCCGGTGGTGCCCGTGCCCGCAGGAAGTGGGCTGGGCCTCGTGCGCCCGTGGGGTCTGCGCTTGGTCTT  
TCTGTGCTTGGATTGTCATATTTATTGCATTGCTGGTAGAGACCCCCAGGCCTGTCCACCCTGCCAAGACTCCTC  
AGGCAGCGTGTGGGTCCCGCACTCTGCCCCCATTTCCCCGATGTCCCTGCGGGCGCGGGCAGCCACCCAAGCCT  
GCTGGCTGCGGCCCCCTCTCGGCCAGGCATTGGCTCAGCCCGCTGAGTGGGGGGTCTGGGGCCAGTCCCCGAGGA  
GCTGGGCCCCTGACAGGCACACAGGGCCCCGGCCACACCCAGCGGGCCCCCGCACAGCCACCCGTGGGGTGTGC  
CCTTATGCCCCGCGCCGGGCACCAACTCCATGTTTGGTGTGTTGTCTGTGTTGTTTTTCAAGAAATGATTCAAAT  
TGCTGCTTGGATTTTGAATTTTACTGTAAGTGTACGTCTGGACCCCGTTTCATTTTACACCAATTT  
GGTAAAAATGCTGCTCTCAGCCTCCCAATTAACCGCATGTGATCTCC

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**FIGURE 5011**

CAGGGAGTGCCTGCAGCACCCCGGCGGGGCCACCCAGTCTGCGTGTACACGAGGGATGAGGTGACGGGTGAAGC  
TGCCCTGCGGGGCACGACGCTGCAGTCGCTGGGCCTGACCGGGGGCAGCGCCACCATCAGGTTTGTCATGAAGTG  
CTACGACCCCGTGGGCAAGACCCAGGAAGCCTGGGCTCGTCAGCGTCGGCTGGCCAGGCAGCCGCCAGCGCTCC  
ACTTCCCTTGGAATCTGGGGAGCTCAGCCGCGGCGACTTGAGCCGTCCGGAGGACGCGGACACCTCAGGGCCCTG  
CTGCGAGCACACTCAGGAGAAGCAGAGCACAAAGGGCACCCGCAGCTGCCCCCTTGTTCCTTTCTCGGGTGGGGG  
ACAGAGACTGGGGGGCCCTCCTGGGCCCACGAGGCCTCTGACATCATCTTCAGCTAAGTTGCCGAAGTCCCTCTC  
CAGCCCTGGAGGCCCTCCAAGCCAAAGAAGTCCAAGTCGGGCCAGGATCCCCAGCAGGAGCAGGAGCAGGAGCG  
GGAGCGGGATCCCCAGCAGGAGCAGGAGCGGGAGCGGCCCTGGACCGGGAGCCCGTGGACCGGGAGCCGGTGGT  
GTGCCACCCCGACCTGGAGGAGCGGCTGCAGGCCTGGCCAGCGGAGCTGCCTGATGAGTTCTTTGAGCTGACGGT  
GGACGACGTGAGAAGACGCTTGGCCCAGCTCAAGAGTGAGCGGAAGCGCCTGGAAGAAGCCCCCTTGGTGACCAA  
GGCCTTCAGGGAGGCGCAGATAAAGGAGAAGCTGGAGCGCTACCCAAAGGTGGCTCTGAGGGTCTGTTCCTCCGA  
CCGCTACGTCCTACAGGGCTTCTTCCGCCCCAGCGAGACAGGTGGGGGACTTGCAGACTTTCGTGAGGAGCCACC  
TGGGGAAACCCGAGCTGTCAATTTTACCTGTTTCATCACCCCTCCAAAAACAGTCCTGGACGACCACACGCAGACCC  
TCTTTAGGCGAACCTCTTCCCGGCGCTCTGGTGCACTTGGGAGCCGAAGAGCCGGCAGGTGTCTACCTGGAGC  
CTGGCCTGCTGGAGCATGCCATCTCCCCATCTGCGGCCGATGTGCTGGTGGCCAGGTACATGTCCAGGGCCGCCG  
GGTCCCCTTCCCCATTGCCAGCCCCTGACCCTGCACCTAAGTCTGAGCCAGCTGCTGAGGAGGGGGCGCTGGTCC  
CCCCTGAGCCCATCCCAGGGACGGCCCAGCCCGTGAAGAGGAGCCTGGGCAAGGTGCCAAGTGGCTGAAGCTGC  
CGGCCAGCAAGAGGTGAGAGCTGCCAGCCTGAGGTGCCCACTCCGCCAGCCACAGGACCACCTCCTCTGCCAGCA  
GGAATAAAGACTTGTGCATCCCTC

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**FIGURE 5012**

MKCYDPVGKTPGSLGSSASAGQAAASAPLPLESGELSRGDLSPEDADTSGPCCEHTQEKQSTRAPAAAPFVPFS  
GGGQRLGGPPGPTRPLTSSSAKLPKSLSSPGGPSKPKKSKSGQDPQQEQEQERERDPQQEQERERPVDREPVDRE  
PVVCHPDLEERLQAWPAELPDEFFELTVDDVRRRLAQLKSERKRLEEAPLVTKAFREAQIKEKLERYPKVALRVL  
FPDRYVLQGFFRPSETGGGLARLREEFPGEPRAVILPVHHPKNSPGRPHADPLSGEPLPGRSGALGSRRAGRCL  
PGAWPAGACHLPICGRCAGGQVHVQGRRVFPPIASP

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**FIGURE 5013**

GACCCCTCCTCTGTAGAGAGTGGTGCTGCCCTCTCGGGATGTACCTGCAGGTGGAGACCCGCACCAGCTCCCGC  
CTCCATCTGAAGAGGGCTCCAGGCATCCGGTCCCTGGTCCCTGCTGGTTGGAATCTTGTCGATTGGCCTGGCTGCT  
GCCTACTACAGCGGAGATAGCCTGGGCTGGAAGCTCTTCTACGTACAGGCTGCCTGTTTGTGGCTGTGCAGAAC  
TTGGAGGACTGGGAGGAAGCCATCTTCGACAAGAGCACAGGGAAGGTTGTTTTGAAGACGTTACAGCTCTACAAG  
AAGCTGCTGACTCTTTTCAGAGCTGGCCACGACCAGGTGGTGGTCTGCTCCATGATGTCCGTGATGTGAGCGTG  
GAGGAGGAGAAGGTCCGGTACTTCGGGAAAGGCTACATGGTGGTCTCCGGCTTGCAGCGGGCTTCTCCACCCC  
CTCACGCAGAGTGCAGTCATGGGCCACCGCAGTGATGTGGAAGCATCGCCAAGCTCATCACCAGCTTCTTGAGC  
TGCCTGCTTGAGAGCCCCACAGAGCTGTCTCAGAGCAGCGACAGTGAGGCCGGTGACCCTGCAAGCCAGAGCT  
GACAGCCCCACTGTGCCTGAGCCGTGCACCGCCCCACAGGACCCATGGCACATTCCCGGTGTGCCTGAGCCCGTG  
CACCGCCCCACAGGACCCGTGGCACATTCCCGGTGTGCCTGAGCCCGTGACCGCCCCACAGGACCCGTGGCACATT  
CCCGGTGTGCCTGAGCCCGTGACCGCCCCACAGGACCCGTGGCACATTCCCGGTGTGCCTGAGCCCGTGACCGC  
CCACAGGACCCGTGGCCTTGGCTTCAGTTGGTGCCTCCAGCCGAGTTGGCCTATTGCCTGCTCATGCTGCTGCTT  
GCACACTGCATGAAACAGCAGGCCAGACCAGGACATCCAGACTTTCTCCATCGTGAGGCCTGGGCCTGCCTTTCT  
GCAGCCGGAGGTCTCGCCAGCCCTGGACTCCTGCTTTGGGCCACAGCAAGACCTCGGGCGAGTGAGAGGGCGGGG  
CCAGGCCGGGCCCTTGTGGGTGCTGATGCTGCATGTTGTCCCCGACACAGCGTCCTCTCCCTGGTGGACATCCCC  
AGCGGTGAGGTGCTTCCCCAAGGGCAGTGAGGGGTGAACATCCAGGGCCTACCTGGCTGTGCACGCTGCAGCCAC  
ACTGTGGAAGCTGCCCCCTCCCCGAGGACCCGCTCCCTTGCTGATGCCAGGATCTCAGCGCATAGACCACTCTGC  
CCCAGCGGTCTGCACAGAAAGGTCTCTGTTCTCAGCTTCAGCATAAGCTGTGAGGCCAGAAAAAAG  
GTCAGCTCTTCTAGTATCGTGCAGTGCTTAAAAACCGGGAGCTCCAGCCGGGCGCAGTGGTTTATGCCAGTAATC  
CCAGCACTTTCCGAGGCCGAGGTGGGAGGATTGCTTGAGGCCAGGAGTTCAAGACCAGCCTGGGCAACACAGCAA  
GATCCTGTCTTTGTAAAAAACTAACCAACAGGAAAACTGGGAGATTTTCTGCAGAAATTGAGTTCCAGCCTC  
TCTCGAACCTGGGAAGACCTGGCAGGAGGGGGCTGGGCTCTCGGCTACAGACTTCTCCCCACCCGTAGGAGCTG  
AACGCCAACCATCCTGACCGCCAGTGCTCTTGGTCTCCTGAGTGTACCCAGGTCTCCAGGTGCGGTGTGCAC  
CGAGCGCGCTGGCCTGATGCCCTGGCCTGTGAGCTGGGACTCCTGGGCCCTGTGAGCCCTAGGCGCAGGCCC  
AGGAATGGCTGGGTAGGACAGGGAACACCTTTGCCCCACGTCTGGCTGTGACCTCGGTGAAAGCCGACAGGAGAG  
AGATGGACCCCTCCTCAGTAGTGGCTGCCAGTCCCTCGTTGCAGGACAGGGTCATCATAACCATAAATAACCC  
TTCAGTGTC

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**FIGURE 5014**

GCGTCGGGGGAGGACAACAAAGGGCCGCGGGCGGGCAGTGGTGTCCCAGTCTCCCGGTGCTTCCCTGAGGCT  
GAGGCGCCCGGCCTCCCGCCCGCGCGCTCCAGATGAAGTGTGAGCACTGCACGCGCAAGGAATGTAGTAAGAAA  
ACAAAACTGATGACCAAGAGAATGTGTACGCCGATGCACCGAGTCCAGCCCAGGAAAATGGAGAGAAGGGAGAA  
TTCCACAAGTTGGCTGATGCCAAGATATTTTTGAGCGACTGCCTGGCATGTGACAGCTGTATGACTGCAGAGGAA  
GGAGTCCAACTTTCCCAGCAAAATGCCAAGGACTTCTTCCGCGTTCTGAACCTTAACAAGAAATGTGATACCTCA  
AAGCACAAAGTGCTGGTAGTGTCTGTGTCTCTCAATCTTTGCCTTATTTTGTCTGCTAAATTCAACCTCAGTGTA  
ACTGATGCATCCAGAAGACTCTGTGGTTTTCTCAAAAGTCTTGGGGTGCCTATGTATTTGATACGACGATAGCT  
GCGGATTTTAGTATCCTGGAGAGTCAAAAAGAATTCGTGCGTCGCTATCGCCAGCACAGTGAGGAGGAACGCACC  
CTGCCCATGCTGACCTCTGCCTGTCTGGCTGGGTCCGATACGCCAGCGGGTGCTGGGTGCGCCCATCACTGCC  
CACCTCTGCACCGCCAAGTCCCCCAGCAGGTCATGGGCTCTTTGGTGAAGGATTATTTGCCCAGACAGCAGAAC  
CTGTCTCCAGAGAAGATTTTCCACGTCATTGTGGCCCTTGTTATGACAAGAAGCTGGAGGCTCTTCAGGAAAGC  
CTTCCCCCTGCTTTGCAATGGCTCCCGGGGCGCTGACTGCGTGTTAACATCAGAAATTAGCCAGGCGTGGTGGTGC  
ACACCTGTGATCACAGCTACTCGGGAGGCTGCGGCAAGAGAATCACTTGAACCCGGGAGGCAGAGGTTACAGCGA  
GACAAGATTGCACCACTGGACTCCAGCCTGGGCGGCGGAGGTGAAATTGCTCAAATAATGGAGCAAGGTGACCTC  
TCAGTGAGAGATGCTGCCGTCGACACTCTGTTTGGAGACTTGAAGGAGGACAAAGTGACGCGTCATGATGGAGCC  
AGCTCAGACGGGCACCTGGCACACATCTTCAGACATGCGGCCAAGGAGCTGTTCAACGAGGATGTGGAGGAGGTC  
ACTTACCGAGCCCTGAGAAACAAAGACTTCCAAGAGGTACCCCTTGAGAAGAACGGAGAGGTGGTGTACGCTTT  
GCTGCAGCCTATGGCTTTCGAAACATCCAGAACATGATCCTGAAGCTTAAGAAGGGCAAGTTCCCATTTCACTTT  
GTGGAGGTCCTCGCCTGTGCTGGAGGATGCTTAAATGGCAGAGGCCAAGCCCAGACTCCAGACGGACATGCGGAT  
AAGGCCCTGCTGCGGCAGATGGAAGGCATTTACGCTGACATCCCTGTGCGGCGTCCGGAGTCCAGTGCACACGTG  
CAGGAGCTGTACCAGGAGTGGCTGGAGGGGATCAACTCCCCCAAGGCCCGAGAGGTGCTGCATACCACGTACCAG  
AGCCAGGAGCGTGGCACACACAGCCTGGACATCAAGTGGTGAAGTCAGGCCAGGGCCTTCAGCTGCTCTTGGGG  
CCAGAGCCAAGAGCCTCTCAGTAGAGGGAGGGGCTGCCCTGAGTGGAGTATTAAAGACACTTAAGAAAACCGCTC  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5015**

MKCEHCTRKECSKKTKTDDQENVVSADAPSPAQENGEKGEFHKLADAKIFLSDCLACDSCMTAEEGVQLSQQNAKD  
FFRVLNLNKKCDTSKHKVLVSVCPQSLPYFAAKFNLSVTDASRRLCGFLKSLGVHYVFDTTIAADFSILESQKE  
FVRRYRQHSEEERTLPMLTSACPGWVRYAERVLGRPITAHLC TAKSPQQVMGSLVKDYFARQQNLSPEKIFHVIV  
APCYDKKLEALQESLPPALHGSRGADCVL TSEISQAWWCTPVITATREAAA RESLEPGRQRLQRDKIAPLDSSLG  
GGGEIAQIMEQGDLSVRDAAVDTLFGDLKEDKVTRHDGASSDGH LAHIFRHA AKELFNEDVEEV TYRALRNKDFQ  
EVTLEKNGEVVLRF AAAYGFRNIQNMILKLKKGKFPFHFVEVLACAGGCLN GRGQAQTPDGHADKALLRQMEGIY  
ADIPVRRPESSAHVQELYQEWLEGINSPKAREVLHTTYSQERGTHSLDIKW



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**FIGURE 5016**

CGTCAAGCTTGGCACGAGGCCATGGAGCAGCTGCTGCGCGCCGAGCTGCGCACCGCGACCCTGCGGGCCTTCGGC  
GGCCCCGGCGCCGGCTGCATCAGCGAGGGCCGAGCCTACGACACGGACGCAGGCCCAGTGTTTCGTCAAAGTCAAC  
CGCAGGACGCAGGCCCGGCAGATGTTTGAGGGGGAGGTGGCCAGCCTGGAGGCCCTCCGGAGCACGGGCCTGGTG  
CGGGTGCCGAGGCCCATGAAGGTCATCGACCTGCCGGGAGGTGGGGCCGCCTTTGTGATGGAGCATTGAAGATG  
AAGAGCTTGAGCAGTCAAGCATCAAACTTGGAGAGCAGATGGCAGATTTGCATCTTTACAACCAGAAGCTCAGG  
GAGAAGTTGAAGGAGGAGGAGAACACAGTGGGCCGAAGAGGTGAGGGTGCTGAGCCTCAGTATGTGGACAAGTTC  
GGCTTCCACACGGTGACGTGCTGCGGCTTCATCCCGCAGGTGAATGAGTGGCAGGATGACTGGCCGACCTTTTTC  
GCCCCGCACCGGCTCCAGGCGCAGCTGGACCTCATTGAGAAGGACTATGCTGACCGAGAGGCACGAGAACTCTGG  
TCCCGGCTACAGGTGAAGATCCCGGATCTGTTTTGTGGCCTAGAGATTGTCCCCGCGTTGCTCCACGGGGATCTC  
TGGTCGGGAAACGTGGCTGAGGACGACGTGGGGCCCATTTATTTACGACCCGGCTTCCTTCTATGGCCATTCCGAG  
TTTGAAGTGGCAATCGCCTTGATGTTTGGGGGGTTCCCCAGATCCTTCTTACCGCCTACCACCGGAAGATCCCC  
AAGGCTCCGGGCTTCGACCAGCGGCTGCTGCTTACCAGCTGTTTAACTACCTGAACCACTGGAACCACTTCGGG  
CGGGAGTACAGGAGCCCTTCCTTGGGCACCATGCGAAGGCTGCTCAAGTAGCGGCCCTGCCCTCCCTTCCCCTG  
TCCCCGTCCCCGT

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**FIGURE 5017**

MEQLLRAELRTATLRAFGGPGAGCISEGRAYDTDAGPVFVKVNRRTQARQMFEGEVASLEALRSTGLVRVPRPMK  
VIDLPGGGA AFVMEHLKMKSLSSQASKLGEQ MADLHLYNQKLREKLKEEENTVGRRGEGAEPQYVDKFGFHTVTC  
CGFIPQVNEWQDDWPTFFARHRLQAQLDIEKDYADREARELWSRLQVKIPDLFCGLEIVPALLHGDWLSGNVAE  
DDVGPIIYDPASFYGHSEFELAIALMFGGFERSFFTAYHRKIPKAPGFDQRLLLYQLFNLYLNHWNHFGREYRSPS  
LGTMRRLK

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**FIGURE 5018**

GACACTATCCGTGCGGCCAGGCGGAGACCCGGAGGACCGAAGCTTCCGGACGACGAGGAACCGCCCAACATGGCC  
TCGGAGAGTGGGAAGCTTTGGGGTGGCCGGTTTGTGGGTGCAGTGGACCCCATCATGGAGAAGTTCAACGCGTCC  
ATTGCCTACGACCGGCACCTTTGGGAGGTGGATGTTCAAGGCAGCAAAGCCTACAGCAGGGGCCTGGAGAAGGCA  
GGGCTCCTCACCAAGGCCGAGATGGACCAGATACTCCATGGCCTAGACAAGGTGGCTGAGGAGTGGGCCCAGGGC  
ACCTTCAAAGTGAAGTCCAATGATGAGGACATCCACACAGCCAATGAGCGCCGCCTGAAGGAGCTCATTGGTGCA  
ACGGCAGGGAAGCTGCACACGGGACGGAGCCGGAATGACCAGGTGGTCACAGACCTCAGGCTGTGGATGCGGCAG  
ACCTGCTCCACGCTCTCGGGCCTCCTCTGGGAGCTCATTAGGACCATGGTGGATCGGGCAGAGGCGAACGTGATG  
TTCTCTTCCCGGGGTACACCCATTTGCAGAGGGCCCCAGCCCATCCGCTGGAGCCACTGGATTCTGAGCCACGCCG  
TGGCACTGACCCGAGACTCTGAGCGGCTGCTGGAGGTGCGGAAGCGGATCAATGTCCTGCCCTGGGGAGGTGGG  
GCCATTGCAGGCAATCCCCTGGGTGTGGACCGAGAGCTGCTCCGAGCAGAACTCAACTTTGGGGCCATCACTCTC  
AACAGCATGGATGCCACTAGTGAGCGGGACTTTGTGGCCGAGTTCTGTTCTGGGCTTCGCTGTGCATGACCCAT  
CTCAGCAGGATGGCCGAGGACCTCATCCTCTACTGCACCAAGGAATTCAGCTTCGTGCAGCTCTCAGATGCCTAC  
AGCACGGGAAGCAGCCTGATGCCCCAGAAGAAAACCCCGACAGTTTGGAGCTGATCCGGAGCAAGGCTGGGCGT  
GTGTTTGGGCGGTGTGCCGGGCTCCTGATGACCCTCAAGGGACTTCCCAGCACCTACAACAAAGACTTACAGGAG  
GACAAGGAAGCTGTGTTTGAAGTGTGACACACTATGAGTGCCGTGCTCCAGGTGGCCACTGGCGTCATCTCTACG  
CTGCAGATTACCAAGAGAACATGGGACAGGCTCTCAGCCCCGACATGCTGGCCACTGACCTTGCTATTACCTG  
GTCCGCAAAGGGATGCCATTCCGCCAGGCCCCAGAGGCTCCGGGAAAGCTGTGTTTCATGGCCGAGACCAAGGGG  
GTCGCCCTCAACCAGCTGTCACTGCAGGAGCTGCAGACCATCAGCCCCCTGTTCTCGGGCGACGTGATCTGCGTG  
TGGGACTACGGGCACAGTGTGGAGCAGTATGGTGCCCTGGGCGGCACTGCGCGCTCCAGCGTCCACTGGCAGATC  
CGCCAGGTGCGGGCGCTACTGCAGGCACAGCAGGCCTAGGTCTCTCCACACCTGCCCCCTAATAAAGTGGGCGCG  
AG

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**FIGURE 5019**

GCGGACCCAGAGAGCCCTGAGCAGCCCCGCCGTGCCGGCCTAGTTACCGTCATACCACGGGAGGAGCCGCAGC  
TGCCGCAGCCGGCCCCAGTCTCCATCACCGCAACCAATGAGCAGCAAGGCCGAGACCCAGCAGCCACCCGCCGCC  
CCCCGCTTTCCCCCACC GCCCCCCCTCCCGTCCCCCGCCGCCCGCCCTCAGCGCCGCCGACACCAAGCCCGG  
CACTACGGGCAGCTGCGCAGGGAGCGGTGGTCCGGGGCGCCTCACATCGGCGGCGCCTGCCAGCGTGGACAAGAA  
GGTCATCGCAGTGAAGGTTTTGGGAACAGTAAAAATGGTTCAATGTAAGGAACGGATATGGTTTCATCAACAGGAA  
TGACACCAAGGAAGATGTATTTGTACACCAGACTGCCATAAAGAATAACCCAGGAAGTACCTTCGCAGTGTAGG  
AGATGAAGAGACTGTGGAGTTTGATGTTGTTGAAGGAGAAGAGGGTGCGGAGGCAGCAAATGTTACAGATCCTGG  
TGGTGTTCAGTTCAAGGCAGTAAATATGCAGCAGATCGTAACCATTATAGACGCTATCCACGTCATAGGGGTCC  
TCCACGCAATTACCAGCAAAAATTACCAGAACAGTGAGAGTGGGGAAAAGACCGAGGGATCGGAGAATGCTCCCGA  
AGGCCAGGCCCAACAATGCCCGCCCTACCGCAGGCAGGTTCCACCTTACTACATGTGGAGACCCTGTGGGTG  
TCGACCACAGTATTCCAGCCCTCCTGTGCAGGGAGAAGTGATGGAGGGTGCTGACAACCAGGGTGCAGGAGAACA  
AGGTAGACCAGTGAGGCAGAAATATGTATCGGGGATATAGACCACGATTCCGCAGGGGCCCTCCTTGCCAAAGACA  
GCCTAGAGAGTACGGCAATGAAGAAGATAAAATCAAGGAGATGAGACCCAGGGTCAGCAGCCACCTCAACGTCGG  
TACCGCAGCAACTTCAATTACCAACGCAGATGCCAGAAAAACCTAAATCACAAGATGGCAAAGAGACAAAATCA  
GCCAATCCACCAGCTGAGAATTCGTCTGCTCCCGAGGCTGAGCAGGGCGGGGCTGAGTAAATGCCGGCTTACCAT  
CTCTACCATCATCCGGTTTAGTCATCCAACAAGAAGAAATATGAAATTCCAGCAATAAGAAATGAACAAAAGATT  
GGAGCTGAAGACCTTAAGTGCTTGCTTTTTGCCCGTTGACCAGATAAATAGAACTATCTGCATTATCTATGCAGC  
ATGGGGTTTTTATTATTTTACCTAAATATGTCTCTTTTTGGTAATAACAAACGTGTTTTTTTTAAAAAGCCTTG  
TTTTTCTCAATACGCCCTTTAAAGGTTTTTAAATTGTTTCATATCTGGTCAAGATGAGATTTTTTAAGCACTTTATT  
TTTAATTTGTAATAAAAAGTTTACAACCTGATTTTTTCAAAAAAGTCAACAACTGCAAGCACCTGTTAATAAAGG  
TCTTAAATAATAATAATAAAAA

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**FIGURE 5020**

CCGCGCCACTTGGCCTGCCTCCGTCCCGCCGCGCCACTTCGCCTGCCTCCGTCCCCCGCCGCGGCCATGCCT  
GTGGCCGGCTCGGAGCTGCCGCGCCGGCCCTTGCCCCCGCCGCACAGGAGCGGGACGCCGAGCCGCGTCCGCCG  
CACGGGGAGCTGCAGTACCTGGGGCAGATCCAACACATCCTCCGTGCGGCGTCAGGAAGGACGACCGCACGGGC  
ACCGGCACCCTGTCCGTATTCCGGCATGCAGGCGCGCTACAGCCTGAGAGATGAATTCCCTCTGCTGACAACCAAA  
CGTGTGTTCTGGAAGGGTGTTTTGGAGGAGTTGCTGTGGTTTATCAAGGGATCCACAAATGCTAAAGAGCTGTCT  
TCCAAGGGAGTGAAAATCTGGGATGCCAATGGATCCCGAGACTTTTTGGACAGCCTGGGATTCTCCACCAGAGAA  
GAAGGGGACTTGGGCCCAGTTTATGGCTTCCAGTGGAGGCATTTTGGGGCAGAATACAGAGATATGGAATCAGAT  
TATTCAGGACAGGGAGTTGACCAACTGCAAAGAGTGATTGACACCATCAAAACCAACCCTGACGACAGAAGAATC  
ATCATGTGCGCTTGAATCCAAGAGATCTTCTCTGATGGCGCTGCCTCCATGCCATGCCCTCTGCCAGTTCTAT  
GTGTGAACAGTGAGCTGTCTGCCAGCTGTACCAGAGATCGGGAGACATGGGCCTCGGTGTGCCTTTCAACATC  
GCCAGCTACGCCCTGCTCAGTACATGATTGCGCACATCACGGGCCTGAAGCCAGGTGACTTTATACACACTTTG  
GGAGATGCACATATTTACCTGAATCACATCGAGCCACTGAAAATTAGCTTCAGCGAGAACCCAGACCTTTCCCA  
AAGCTCAGGATTCTTCGAAAAGTTGAGAAAATTGATGACTTCAAAGCTGAAGACTTTTCAATTGAAGGGTACAAT  
CCGCATCCAATAATTAATAATGGAATGGCTGTTTAGGGTGCTTTCAAAGGAGCTCGAAGGATATTGTCAGTCTTT  
AGGGGTTGGGCTGGATGCCGAGGTAAAAGTTCTTTTGTCTAAAAGAAAAAGGAAGTGGTCAAAAATCTGTCC  
GTGACCTATCAGTTATTAATTTTAAAGGATGTTGCCACTGGCAAATGTAAGTGTGCCAGTTCTTTCCATAATAAA  
AGGCTTTGAGTTAACTCACTGAGGGTATCTGACAATGCTGAGGTTATGAACAAAGTGAGGAGAATGAAATGTATG  
TGCTCTTAGCAAAAACATGTATGTGCATTTCAATCCCACGTACTTATAAAGAAGGTTGGTGAATTTACAAGCTA  
TTTTTGAATATTTTGAATATTTTAAAGATTTTACAAGCTATTCCTCAAATCTGAGGGAGCTGAGTAACACC  
ATCGATCATGATGTAGAGTGTGGTTATGAACTTTAAAGTTATAGTTGTTTTATATGTTGCTATAATAAAGAAGTG  
TTCTGC

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**FIGURE 5021**

TAAAAACAGGGAATGACTCTACTAATGATGGGGTCAGCAGATGCTCTTCCAGAAGAACCCTCAGCCAAAACCTGTC  
TTCGTAGAAGACATGACAGAAGAACAGTTAGCATCTGCTATGGAGTTACCATGTGGATTGACAAACCTTGGTAAC  
ACTTGTACATGAATGCCACAGTTTCAGTGTATTTCGTTCTGTGCCTGAACTCAAAGATGCCCTTAAAAGGTATGCA  
GGTGCCTTGAGAGCTTCAGGGGAAATGGCTTCAGCGCAGTATATTACTGCAGCCCTTAGAGATTGTTTGATTCC  
ATGGATAAAACCTTCTCCAGTATTCCACCTATTATTCTACTGCAGTTTTTGCACATGGCTTTCCACAGTTTGCC  
GAGAAAGGTGAACAAGGACAGTATCTTCAACAGGATGCTAATGAATGTTGGATACAAATGATGCGAGTATTGCAA  
CAGAAATTGGAAGCAATAGAGGATGATTCTGTAAAGAGACAGACTCCTCATCTGCATCGGCAGCGACACCTTCT  
AAAAAGAAAAGTTTAAATCGATCAGTTCTTCGGTGTGAGTTTGAAACTACCATGAAATGTACAGAATCTGAAGAA  
GAAGAAGTCACCAAAGGAAAGGAAAATCAACTTCAGCTTAGCTGTTTTATCAATCAGGAAGTCAAGTATCTTTTT  
ACAGGACTTAAATTGCGACTTCAGGAAGAAATCACCACAGTCTCCAACGTTGCAAAGAAATGCCCTGTATATC  
AAATCTTCCAAGATCAGCCGGCTGCCTGCTTACTTGACCATTTCAGATGGTTCGATTTTTTTATAAGAGAAGGAA  
TCTGTGAATGCCAAAGTTCTTAAGGATGTTAAATTTCTCTTATGTTGGATATGTATGAACTGTGTACACCAGAA  
CTTCAAGAGAAAATGGTGTCTTTTCGATCCAAATTCAAGGATCTAGAAGATAAAAAAGTGAATCAGCAGCCAAAT  
ACAAGTGACAAAAGAGTAGTCCCCAGAAAGAAGTTAAGTATGAACCCCTTTTCTTTTGCTGATGATATTGGCTCC  
AATAATTGTGGATACTATGACTTACAAGCAGTACTAACACACCAGGGAAGGTCTAGTTCTTCAGGTCAATTATGTA  
TCATGGGTGAAAAGGAAACAAGATGAATGGATTAAAGTTTGATGATGACAAAGTCAGCATCGTAACACCAGAAGAT  
ATCTTACGGCTTTCTGGTGGTGGAGACTGGCATATCGCTTACGTTCTACTCTATGGGCCTCGCAGAGTTGAAATA  
ATGGAAGAGGAAAGTGAACAGTAATCTTCATTTTAGTATTTATGCTTAGATGTGAAAATAAATGTTATTGTGTA  
TCATTTCTATAATCCAGAGCTTTAGAGGAAGACACATAGGTGGGTTTATGTTTCACCTCATTGGAACAAAAGAG  
GACAGAAGCAGACCACTCTGTGCACCAACCTAAAAAATTACAGAGAAGAGAAAATTATCTTTGGATTGTGCTGCC  
CTATATAAAGGTGGCAGAAAGACATTTTAAAAAGCTTATTATTTCTTGCAATTATTTAAAAAGTTCAGAGTTGA  
AATGCCTTTCAACCATTTCCTTCTGTGGTCATTTTCTTGCTGCCTTTTTCACCCAAGATTTCAGCAGTCAGATGT  
TTACTGCACACCTATTACCTATTATTTGCTGTTCTTGCAATGGTTCAAACCACCATTCGTAGCCACCCATCCTTT  
GCCTTATCTAACAAACATTTTCCAGGAAGGTGGAAGGAAGTGTGCTCTCATTGTGTGACTCAGTGCTGCTG  
TCCATCCCATGGAACATGGGCACAATCAAGTATTTGTCCAGCCTATTGCAGGCTTTTCTGACTTTAAAAATAAA  
TTGTGATCAATAATAGTACCTTTGATTATACATTTATTATTGTGTCTCTCTCTGATGTACTGTGGATTGTACATT  
TAACTTTGGAATGGCTTTGTAATAATCAGTCTTAAGAAAATGTTGACAAGCTCTGGTTGCTTATTTTGAAGAAAT  
GAGGACATTTAATAATAATAAAAAAAGGGATTAATAGCTTTTGACCTCAAGTCTTTGTCTTCTGAGTGTGG  
AGCTTGGCTGAAGACATGTTAATACTGTACAATTTCTGAAGATGGTTATTAACTGTGCTGTTAAGCATCCAT  
TAAAAATATGTTATCTTCTTTGCCTGCC

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**FIGURE 5022**

GGTATT CAGGAAGGAACACAATGTACCAATGTAAAAATAACTGGGCACTGAAGTTTTCTATCATATTATTATAC  
ATTTTGTGTGCCTTGCTAACAATCACAGTAGCCATTTTGGGATATAAAGTTGTAGAGAAAATGGACAATGTCACA  
GGTGGCATGGAAACATCTCGCCAAACCTATGATGACAAGCTCACAGCAGTGGAAAGTGACCTGAAAAAATTAGGT  
GACCAAACTGGGAAGAAAGCTATCAGCACCAACTCAGAACTCTCCACCTTCAGATCAGACATTCTAGATCTCCGT  
CAGCAACTTCGTGAGATTACAGAAAAACCAGCAAGAACAAGGATACGCTGGAGAAGTTACAGGCGAGCGGGGAT  
GCTCTGGTGGACAGGCAGAGTCAATTGAAAGAACTTTGGAGAATAACTCTTTCCTCATCACCCTGTAAACAAA  
ACCCTCCAGGCGTATAATGGCTATGTCACGAATCTGCAGCAAGATACCAGCGTGCTCCAGGGCAATCTGCAGAAC  
CAAATGTATTCTCATAATGTGGTCATCATGAACCTCAACAACCTGAACCTGACCCAGGTGCAGCAGAGGAACCTC  
ATCAGCAATCTGCAGCGGTCTGTGGATGACACAAGCCAGGCTATCCAGCGAATCAAGAACGACTTTCAAAATCTG  
CAGCAGGTTTTTCTTCAAGCCAAGAAGGACACGGATTGGCTGAAGGAGAAAGTGCAGAGCTTGCAGACGCTGGCT  
GCCAACAACTCTGCGTTGGCCAAAGCCAACACGACACCCTGGAGGATATGAACAGCCAGCTCAACTCATTACACA  
GGTCAGATGGAGAACATCACCCTATCTCTCAAGCCAACGAGCAGAACCTGAAAGACCTGCAGGACTTACACAAA  
GATGCAGAGAATAGAACAGCCATCAAGTTCAACCAACTGGAGGAACGCTTCCAGCTCTTTGAGACGGATATTGTG  
AACATCATTAGCAATATCAGTTACACAGCCCACCACCTGCGGACGCTGACCAGCAATCTAAATGAAGTCAGGACC  
ACTTGACAGATAACCCTTACCAAAACACACAGATGATCTGACCTCCTTGAATAATACCCTGGCCAAACATCCGTTTG  
GATTCTGTTTTCTCTCAGGATGCAACAAGATTTGATGAGGTCGAGGTTAGACACTGAAGTAGCCAACTTATCAGTG  
ATTATGGAAGAAATGAAGCTAGTAGACTCCAAGCATGGTCAGCTCATCAAGAATTTTACAATACTACAAGGTCCA  
CCGGGCCCCAGGGGTCCAAGAGGTGACAGAGGATCCAGGGACCCCTGGCCCAACTGGCAACAAGGGACAGAAA  
GGAGAGAAGGGGGAGCCTGGACCACCTGGCCCTGCGGGTGAGAGAGGCCCAATTGGACCAGCTGGTCCCCCGGA  
GAGCGTGGCGGCAAAGGATCTAAAGGCTCCCAGGGCCCCAAAGGCTCCCGTGGTTCCCCTGGGAAGCCCGGCCCT  
CAGGGCTCCAGTGGGGACCCAGGCCCCCCGGGCCACCAGGCAAAGAGGGACTCCCCGGCCCTCAGGGCCCTCCT  
GGCTTCCAGGGACTTACGGCACCGTTGGGGAGCCTGGGGTGCTGGACCTCGGGGACTGCCAGGCTTGCTGGG  
GTACCAGGCATGCCAGGCCCAAGGGCCCCCGGCCCTCCTGGCCCATCAGGAGCGGTGGTGCCTGGGCCTGC  
AGAATGAGCAACCCAGCACCGGAGGACAATGGCTGCCCGCCTCACTGGAAGAACTTCACAGACAAATGCTACTA  
TTTTTCAGTTGAGAAAGAAATTTTTGAGGATGCAAAGCTTTTCTGTGAAGACAAGTCTTCACATCTGTTTTTCAT  
AAACACTAGAGAGGAACAGCAATGGATAAAAAACAGATGGTAGGGAGAGAGAGCCACTGGATCGGCCTCACAGA  
CTCAGAGCGTGAAAATGAATGGAAGTGGCTGGATGGGACATCTCCAGACTACAAAAATTGGAAAGCTGGACAGCC  
GGATAACTGGGGTCATGGCCATGGGCCAGGAGAAGACTGTGCTGGGTTGATTATGCTGGGCAGTGGAAACGATTT  
CCAATGTGAAGACGTCAATAACTTCATTTGCGAAAAAGACAGGGAGACAGTACTGTCTATCTGCATTATAACGGAC  
TGTGATGGGATCACATGAGCAAATTTTCAGCTCTCAAAGGCAAAGGACACTCCTTTCTAATTGCATCACCTTCTC  
ATCAGATTGAAAAAAGCACTGAAAACCAATTACTGAAAAAAATTGACAGCTAGTGTTTTTACCATCCG  
TCATTACCCAAAGACTTGGGAATAAAATGTTCCCCAGGGTGATATGCTGATTTTCATTGTGCACATGGACTGAA  
TCACATAGATTCTCCTCCGTGAGTAACCGTCCGATTATACAAATTATGTCTTCCAAAGTATGGAACACTCCAATC  
AGAAAAAGGTTATCATTGGTCGTTGAGTTATGGGAAGAACTTAAGCATATACGTGTAAACAGTGCCATACATTT  
CTAAATCCCAAGTGTAGGAAAAATATGCAGACATACAGATATATAGGCCAACTATTAGTAATAATATGAAATAT  
ACTTAAAGAGCTTTTAAACTTTGTATTTTGTACAAAATATTGTCTTTTACAATTTTTTCTTTTTTTTTTTT  
TTGTCATTTTTACCGACATAATACATGGAGCCAAAGAAAACAATAATGGTACTAATAAAAACCTCTAGGGTTTCCT  
GTCAGATTTAATTCTACCCAGTGGCAAAGAATTTTTTCAATTGTGGCTTTAAAAAATAATTAAATATACATGTA  
TATATATAT

CTCAGGCCACGAAAGCCCCCTGTCTGTCTAGCAGATACTTGCACGGTTTACAGAAATTCGGTCCCTGGGTCTG  
GTCAGGAAACTGGAAGGCTCATAGCAATGAGCGCAGTTCAGTTTCCAGCGGTGGTCTGGCCGCCTCTCCA  
TGCAGGAGTTAAGATCCAGGATGTAAATAAACAGGCCCTCTATACCCCTCAAACCAAGAGAAACCAACCTTTG  
GAAAGTTGAGTATAAACAAACCGCATCTGAAAAGAAAGTCTCGCTATTGGCAAAGAACTAGTGGACATGGAT  
CCCGGAATAGTCAACTTGGTATATTTTCCAGTTCTGAGAAATCAAGGACCCGAGACCCTTAATGACAAAGCAT  
TCATTACAGCAGTGATTTCGACAACCTCTGTGAGTTTCTTACAGAAATGGTTATGCACATAATGTGTCCATGAAA  
CTCTACAAGCTCCCTCTGTTAAAGACTTCCTGAAGATCTTCACATTTCTTTATGGCTTCTCTGTGCCCTCATACG  
AACTTCTGTACACAAAGTTTGAAGAAGAGGTTCCAAGAATCTTTAAAGACCTTGGGTATCCTTTTGCATATCCA  
AAAGCTCCATGTACACAGTGGGGGCTCCTCATACATGGCCTCACATTGTGGCAGCCTTAGTTTGGCTAATAGACT  
GCATCAAGATACATACTGCCATGAAAGAAAGCTCACCTTTATTTGATGATGGGCAGCCTTGGGGAGAAGAACTG  
AAGATGGAATTATGCATAATAAGTTGTTTTTGGACTACACCATAAAATGCTATGAGAGTTTTATGAGTGGTGCCG  
ACAGCTTTGATGAGATGAATGCAGAGCTGCAGTCAAACCTGAAGGATTTATTTAATGTGGATGCTTTTAAGCTGG  
AATCATTAGAAGCAAAAACAGAGCATTGAATGAACAGATTGCAAGATTGGAACAAGAAAGAGAAAAAGAACCGA  
ATCGTCTAGAGTCGTTGAGAAAACCTGAAGGCTTCCTTACAGGAGATGTTCAAAGATATCAGGCATACATGAGCA  
ATTTGGAGTCTCATTACGCCATTCTTGACCAGAAATTAATGGTCTCAATGAGGAAATTGCTAGAGTAGAACTAG  
AATGTGAAACAATAAAACAGGAGAACACTCGACTACAGAAATATCATTGACAACCAGAAGTACTCAGTTGCAGACA  
TTGAGCGAATAAATCATGAAAGAAATGAATTGCAGCAGACTATTAATAAATTAACCAAGGACCTGGAAGCTGAAC  
AACAGAAAGTTGTGGAATGAGGAGTTAAATATGCCAGAGGCCAAAGAAGCGATTGAAACACAATTAGCAGAGTATC  
ACAAATTGGCTAGAAAATTAAACTTATTTCTAAAGGTGCTGAGAATTCCAAAGGTTATGACTTTGAAATTAAGT  
TTAATCCCGAGGCTGGTGCCAACTGCCTTGTCAAATACAGGGCTCAAGTTTATGTACCTCTTAAGGAACCTCTGA  
ATGAAACTGAAGAAGAAATTAATAAAGCCCTAAATAAAAAAATGGGTTTGGAGGATACTTTGAACAATTGAATG  
CAATGATAACAGAAAGCAAGAGAAGTGTGAGAACTCTGAAAGAAGAAGTTCAAAGCTGGATGATCTTTACCAAC  
AAAAAATTAAGGAAGCAGAGGAAGAGGATGAAAAATGTGCCAGTGAGCTTGAGTCCTTGGAGAAACACAAGCACC  
TGCTAGAAAGTACTGTTAACCAGGGGCTCAGTGAAGCTATGAATGAATTAGATGCTGTTACGCGGAATACCAAC  
TAGTTGTGCAAAACCACGACTGAAGAAAGACGAAAAGTGGGAAATAACTTGCAACGCTGTTAGAGATGGTTGCTA  
CACATGTTGGTCTGTAGAGAAACATCTTGAGGAGCAGATTGCTAAAGTTGATAGAGAATAGAAGAATGCATGT  
CAGAAGATCTCTCGGAAATATTAAAGAGATTAGAGATAAGTATGAGAAGAAAGCTACTCTAATTAAGTCTTCTG  
AGAATGAAGATAAAATGTTGATCATGTATATATCCATAGTGAATAAAATTTGTCTCAGTAAAAA



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**FIGURE 5024**

MRSSVSSGGAGRLSMQELRSQDVNKQGLYTPQTKEKPTFGKLSINKPTSERKVSFLGKRTSGHGSRNSQLGIFS  
SSEKIKDPRPLNDKAFIQQCIRQLCEFLTENGYAHNVSMKSLQAPSVKDFLKIFTFLYGFLCPSYELPDTKFEEE  
VPRIFKDLGYPFALSKSSMYTVGAPHTWPHIVAALVWLIDCIKIHTAMKESSPLFDDGQFPWGEETEDGIMHNKLF  
LDYTIKCYESFMSGADSFDEMNAELQSKLKDLFNVDAPFKLESLEAKNRALNEQIARLEQEREKEPNRLESRLRLK  
ASLQGDVQKYQAYMSNLESHSAILDQKLNGLNEEIARVELECETIKQENTRLQNIIDNQKYSVADIERINHERNE  
LQQTINKLTKDLEAEQQKLWNEELKYARGKEAIETQLAEYHKLARKLKLIPKGAENSKGYDFEIKFNPEAGANCL  
VKYRAQVYVPLKELLNETEEEINKALNKKMGLEDTLEQLNAMITESKRSVRTLKEEVQKLDDLYQQKIKEAEED  
EKCASELESLEKHKHLLSTVNQGLSEAMNELDAVQREYQLVVQTTTEERRKVGNNLQRLLEMVATHVGSVEKHL  
EEQIAKVDREYEECMSEDLSENIKEIRDKYEKKATLIKSSEE

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FIGURE 5025A

GAGAAGAAGTGGCAGGTGATGCTGAAGCGGGGGAGAAGCGGCAGAGCCGGCCACACAGTGCAGGGGATGGAGACA  
GGTGCTGGGCTGGTCCTCCTGCAGCATCCTCAGTTGTTGGAGGGCAGTCATCCTCAGGCCGTACCCAGCCAGAGA  
AGAAAAAGAACAGTGTGAAGCCACGTGTGATAGCCGTCCAACATCGGCTCTTCCCTCCAATTACATTGTAGTTGA  
TTGTAGTCTCAAACCATGAATTATGTGGGACAGCTGGCTGGGCAGGTGATTGTCACTGTGAAGGAACCTACAAG  
GGCATTAAACCAGGCCACCCTCTCTGGGTGCATTGATGTCATCGTGGTACAGCAGCAGGATGGCAGCTATCAGTGT  
TCACCTTTTTCACGTTTCGGTTTGGAAAGCTGGGAGTCTGAGATCCAAAGAGAAAGTGATTGATATAGAAATCAAC  
GGCAGTGCAGTGGATCTTCACATGAAGTTGGGTGATAACGGAGAAGCTTTCTTTGTTGAGGAGACTGAAGAAGAA  
TATGAAAAGCTTCTGCTTACCTTGCCACCTCACCAATTCCTACTGAAGATCAGTTCTTTAAAGATATTGACACC  
CCTTTGGTGAAATCGGGTGGAGATGAAAACCAATCTCAGAGTTCAGACATCTCACACGTTCTGGAAACAGAGACA  
ATTTTTACTCCAAGTTCTGTGAAAAAGAAAAACGAAGGAGAAAGAAATACAAACAGGACAGTAAGAAGGAAGAG  
CAGGCCGCATCTGCTGCTGCAGAAGACACATGTGATGTAGGCGTGAGCTCCGATGATGACAAGGGGGCCAGGCA  
GCACGAGGATCTTCAAATGCTTCCTTGAAAGAAGAAGATGTAAAGAGCCTTTGCTCTTCCATTCTGGGGATCAT  
TACCCCTTATCTGATGGAGATTGGTCCCTTTAGAGACCACCTATCCCCAGACAGCGTGTCTTAAGAGTGATTCA  
GAGCTGGAGGTGAAACCTGCGGAGAGCCTGCTCAGATCAGAGTCTCACATGGAGTGGACGTGGGGCGGATTCCCA  
GAGTCCACCAAGGTGAGCAAAAGAGAACGATCTGACCATCATCCTAGGACAGCTACAATTACACCATCAGAAAAT  
ACTCATTTTTCGGGTAATTCCCAGTGAGGACAACCTCATCAGTGAAGTTGAGAAGGATGCTTCCATGGAAGACACT  
GTCTGTACCATAGTGAAGCCCAAACCCAGAGCCCTGGGTACACAGATGAGCGACCCAACATCTGTGGCAGAGCTT  
CTCGAACCTCCTCTTGAGAGTACTCAGATTTATCTATGTTAGATGCTGACCACCTTCCCAACGCAGCCTTAGCG  
GAGGCGCCCTCAGAAATCCAAACCGGCAGCTAAAGTAGACTCGCCGTCAAAGAAGAAAGGTGTTACAAAAGAAGC  
CAACACCAGGGACCTGATGATATTTACCTTGATGACTTAAAGGGTCTAGAACCTGAAGTTGCAGCTCTTTATTTT  
CCTAAAAGTGAATCGGAGCCCGGTTCCAGGCAGTGGCCCGAGTCTGACACACTCTCTGGCTCCAGTCCCCACAG  
TCCGTGGGAAGCGCAGCTGCAGATAGCGGCACCGAGTGCCTCTCAGATTCTGCCATGGACTGCCTGACGTTACC  
CTCTCCCTTTGCGGGGGCTCAGTGAATGGAGAAATTTCAAAGAAAAATTCATGGAGCATATCATTACTTAT  
CACGAATTTGCAGAAAACCTGGACTTATAGACAATCCTAACCTTGTAATAAGGATATATAATCGTTACTATAAC  
TGGGCTTTGGCAGCTCCCATGATCCTTAGCTTGCAAGTATTCAGAAGAGCTGCCTAAGGCCACAGTTGAGTCC  
TGGGTGAAAGACAAGATGCCAAAGAAATCTGGTCTGCTGGTGGTTTTGGCGAAAGAGAGAAAGCATGACCAAACAG  
CTGCCAGAATCCAAGGAGGGAATCTGAGGCACCGCCAGCCAGTGACCTGCCATCCAGCTCCAAGGAGCCGGCC  
GGTGCCAGGCCCGGCGAGAATGACTCCTCGAGTGACGAGGGATCACAGGAGCTCGAAGAATCCATCACAGTGGAC  
CCCATCCCCACAGAGCCCCTGAGCCACGGCAGCACAACTTCATATAAGAAGTCTCTCCGCCTCTCCTCAGACCAG  
ATCGCAAAACTGAAGCTCCACGATGGCCCAAATGATGTTGTGTTTAGTATTACAACCCAGTATCAAGGCACCTGT  
CGCTGTGCAGGGACCATTTACCTGTGGAATGGAATGACAAGATCATATTTCTGATATTGATGGGACAATAACC  
AAGTCGGATGCTTTGGGACAGATTCTCCCACAGCTGGGCAAGACTGGACCCACCAGGGTATAGCAAAGCTCTAC  
CATTCCATCAATGAGAAATGGCTACAAGTTTCTGTACTGCTCGGCTCGTGCCATCGGCATGGCCGACATGACCCGT  
GGCTACCTGCACTGGGTCAATGACAAGGCACAATCTTGCCCCGGGGCCCCCTGATGCTGTCCCCAGCAGCTTG  
TTCTCCGCCTTCCACAGAGAAGTGATAGAAAAGAAACCAGAGAAGTTCAAATTTGAGTGTCTAAATGATATCAAG  
AATCTGTTTGCCCCGTCTAAGCAGCCCTTCTATGCTGCCTTTGGAAACCGTCCAAATGATGTCTATGCCTACACA  
CAAGTTGGAGTTCCAGACTGTAGAATATTCACCGTGAACCCCAAGGGTGAATTAATACAAGAAAGAACCAAGGA  
AACAAGTCATCGTATCACAGGCTGAGTGAGCTCGTGGAGCATGTGTTCCCCCTTCTCAGTAAGGAGCAGAATTC  
GCTTTTCCCTGCCCCGAGTTCAGCTCCTTCTGCTACTGGCGAGACCCGATCCCTGAAGTGGACCTGGATGACCTG  
TCTTGAGGCGGCACCTCAGTGGGTGGGCAGGGCTTGGTCCCCCTCCCCACAGCAAGGGAAGGCAGCTGGCTCTTC  
TGCTGACCTCAGATACCAGCCTTCCCCAGCGGGGACGGGTGCTTCTGGAGCTGGTCCCGCCATCTCCTTTGCCT  
TCCCAGGCCAGCTGCTCAGGCTCGGCAGGTCTGCAGCTCAGCTCCTGGAAGGAGAAGGGAGGAACGGGCCTGGG  
GCTGGAGGCTGGGATCCCTCCTTTGTGGGTGCGACACATGTTTCTGCTGTGAGCTGGGGCCTCCTTCCATTGC  
ATCATTTTTAAAGGAAGAAAAAGCAGCTAAAAAGAGTGGACCAAAACACTGCACACAGTGAAGTGTTCAGTTT  
CCACTGGGCAGTTGAGGTGGCTTCTGTAACCAGGGCTGTCTTCAGATGTCAGGGTCCCTGAAGTGTGCGGGCCC  
AGTCAGTGATGCTGGCTGAAGCTGCCTGTGCAGCTTTCTTCTGCTGCGCTCATTCTGCTACACTGAAGGGG  
TCAGCTGCTCAGTGGGCCAAGTTGGGCAGGACCCCCGCCCCCTGCAGGGCCCATGCACCAGAGCCACTGAGCCCA  
GTCCCATAAACCTGGCCCTTTTGGGGAAGATCCCCACAGAGCATCCTCCTCTCATCTGTGACAACTCCACGAG

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**FIGURE 5025B**

CCCTTAATTCTTAGTCCTCACCAGAAGAACAGGTCTCACAAGTATATATTTGATGTCTGTAATAAAAGTGGGAA  
GGTGGGTCTTAAAACAGACCAAACCCGCCCGCCCCCAACAACCTCTGCTTTTAGGGAGGCCTCCGAAATGCAGA  
TAGGCGGTTGAGTGGGGTCTTGGGAAGAGCGCTGAATCCCTCTGCTTGTGCTGGCTGGTGTGGGCCTTTGGAAAGCA  
TCTTGCCCTTGGGACAGGATTTCTAAAATTCTGTGATTGAGATTGTGTCAGGGAAGCACAGTGAAGCTTGCTTAAAG  
GCACTGGCCAGCAGTGTGTGACTTTGGCTTTTGGGATCACACCTGTAAATCGGGCCCGTGAAGCAGCGTCAAAG  
AGGGGTCTTGGAGCTCCTATGGAGCAGACTGCCCCCGAGCAGTGTCCCAGCCTAGCCCTGTGAGACCCCATGG  
GGACACGGGTGCCATATGTATTTTCACTAAAATATACATGGTAGCTCCATTTACTGATGCGGTTGTAATGAGCTCA  
CATCGTGTCTGAAGAGATGGCACCAGGGAAGGTGTGCCATAAGCTGTCCAGAGCTTTTGGTATGCTGAGTGT  
GACAGAGCTGCACTCTTAACATCAAGAGAAGTGTGAGGAGCCCAAGAACCCAGGTCTTGGTCTCCATTGGC  
GAGAACACAGGACGTGGTGGTTCCTGAGCAGAGAGGGATCTGCAGATACAGGCTTGGCGCTCGGGGTGGTCTCGT  
GGCCAACTCTTCATGCCCCCTGCCGTGTAGTGGAACTCTACATGTTTTAGTTTGTCTCACCTAAAATAATGCTG  
ATCTAGAGATAGAGAAATAGGGGTGGTTATTTTTCCAGATTGGAGAGTTGAAAGTCCCTGACTGATTTAGCCAT  
TTTCTAGTGTCTGTGCGATGCAGAGACAATGTTGAAATCCCTAAAACACAGTTCTCAGTGGCAAAACCTAGGAA  
GGCTCATGTTCCAGAGAAGGGACCACATGAGCCTTCTCCATGCAAAGCTTCCCCAGCTTAAATAGTTGATAA  
GGACTAATTGTTAATGAGTTTATTTATCTACAGTAGGTTAGGGATCCTGGGTTCTGTTTATATGAAGTCTTCC  
CAGTTTGTGAATTCTAGTACAGCAGCCATGCAGCCACCTTATTTATAGATGCCATCTGTGTCTCTCTGACTA  
CCTTCTATTTAGAGGAAGAATGAGAGCTTTGTGTGTTAACTGAGCTTATAGTAGGACTTCTTTGCATATGTATG  
GTACTGAAAAATCTTAATATACATCTTAATCCTTTTAGGTTGTCTTTAAAGAGTTTGTACTAGTTCTTTT  
TCTTGACAGCTCTTCTTTTGGACACATGGGCCTTCTTAGAGGGTTCAGTCTAGGACCCGGCTCTCCTGGCCCTG  
TGTGAGGGTAGCTGGTCCCTCTGTCCCTGTGCTGCTAGCACTAGACTTTGTTGCTGCAGATTGATCCAGTGGG  
TACATAGGCTAATTAATGTGAGTCTTTTCTTGTGTTAAAGGAGTCCCTCTTGCTGAAAGTAGATGATTACTATT  
GCTGTAGTGTAGGAAAGTATTAAGTTTGTGCTGAAAATCCATTGCCATTTGGTACAAATGACATTTGTCTTTT  
TGTGAAAGAGATGCCCTCGAGTGTGTTTGTACACAAACCTTAGGATGGTGAAGTGAAGCATCACCTCGCGCTA  
TCTTCAGTGACGGGTGACGGCTCAGGGAGATGGCAGGCAGATTGGGCTCTAAGTCATTATCTCTCAGTTACTCC  
ATTGGTGAAATGGCCCTTTCCCTCTTTGCAGTTTCTAGTCTAAGTCTCGTATTTGCTTTGCTGTCTGTGTGCTGAAG  
CTCGTCCCGTGTGAGTTGCTGTCTGCCCTTGTGAGGCTGTGAGGTGCTCGTGTAGACCTGGAGCATGCAGGCTG  
CCTCCGTTTTTGGGTACTGTGTTGTGTTTTGCTCTGTCTAAAACATCTGCATAGTTTTCAACTGGAAAAAGAAA  
AACTTAAAAATGGGATGTCTTAAATGAAAGCTGCTCAAAGTCACAGAACAACCGAGGGACAAAGGAGATTGGA  
TGACTGGGAAGCGCTGGCCCGAACAGCCCTGCAACTGTGGGGCCTGCACACAGCCCTTCCACAGTTGGCACTG  
CAGGTGCAGGCCAACCCCTTAAAGAATAAACAAGGAAGTCAGCTCTTCACTTTTTACAAGTTGGCAAAACAGA  
CTTCCGGGGAATTTGATGTTTTCCCGTGTGTAGAGCTTCCAGGGTTAATAAACTGGTTAAAAATTGAGTCT  
TTCCCTGAAGTAAGTGTCTTTCCAGATGAAAACACTCTTTTGGTTTTGTTTGAAGTAAGAAAGGGAGGGGAA  
ACTTTGCTCTTTTAAATAATTATGTTTCCAGCTATGATGAAGTATTTGATTATTAGACAGCAATGTCACTAATAAGT  
TTTAAGTTGTCAAAGTTAATTGTAAACATCATCAGTACAGTACTCTTAGTTACAGTAAAGCAATTGTTGCAAGA  
TGAATGGCTAATATTTTGGTGCAGTGTGATGTTCAAACAAATGTTACAACAATAAACGAACATAACAT

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**FIGURE 5026**

GAATTAAACAACCACCATGTCGAGCAAAAAGGCAAAGACCAAGACCACCAAGAAGCGCCCTCAGCGTGCAACATC  
CAATGTGTTTGCCATGTTTGACCAGTCACAGATTCAGGAGTTCAAAGAGGCCTTCAACATGATTGATCAGAACAG  
AGATGGCTTCATCGACAAGGAAGATTTGCATGATATGCTTGCTTCTCTAGGGAAGAATCCCACTGATGCATACCT  
TGATGCCATGATGAATGAGGCCCCAGGGCCCCATCAATTTACCATGTTTCTGACCATGTTTGGTGAGAAGTTAAA  
TGGCACAGATCCTGAAGATGTCATCAGAAACGCCTTTGCTTGCTTTGATGAAGAAGCAACAGGCACCATTTCAGGA  
AGATTACCTAAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAGCTGTACAGAGA  
AGCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTGAAACATGGAGCCAAAGACAA  
AGATGACTGAAAGAAGCTTTAGCTAAAATCTTCCAGTTACATTGTCTTACTCTCTTTTACTTCTCAGACACTTCCC  
CCACCCTCATAGAACCTGTTGCATGCAACTTAGTTTCACAGCTTTGCCTCTTCTTTTGTATGTTTATTCCAGA  
CCTTTCTGCCACTTAGCACTTGTATAATCAGACTGGAAATGGGGATGAGGGTGTAAATTGTATTGAAAAAGATCG  
CGAATAAAAATCAACAAATGTGAAAGCCCAGAAAAATATATTCGTATTTCTGGTTTTGCTGGATTTTACATTTT  
TATATAATAAAAATGTTATTTTGAATAAAGATTATGCTGACTCAAATGCAATGT

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**FIGURE 5027**

GAATTAAACAACCACCATGTCGAGCAAAAAGGCCAAAGACCAAGACCACCAAGAAGCGCCCTCAGCGTGCAACATC  
CAATGTGTTTGCCATGTTTGACCAGTCACAGATTCAGGAGTTCAAAGAGGCCTTCAACATGATTGATCAGAACAG  
AGATGGCTTCATCGACAAGGAAGATTTGCATGATATGCTTGCTTCTCTAGGGAAGAATCCCACTGATGCATACCT  
TGATGCCATGATGAATGAGGCCCCAGGGCCCATCAATTTACCATGTTCTTGACCATGTTTGGTGAGAAGTTAA  
TGGCACAGATCCTGAAGATGTCATCAGAAACGCCTTTGCTTGCTTTGATGAAGAAGCAACAGGCACCATTGAGGA  
AGATTACCTAAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAGCTGTACAGAGA  
AGCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTGAAACATGGAGCCAAAGACAA  
AGATGACTGAAAGAACTT

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**FIGURE 5028**

AACCACCACCATGTCGAGCAAAAGAACAAGACCAAGACCAAGAAGCGCCCTCAGCGTGCAACATCCAATGTGTT  
TGCTATGTTTTGACCAGTCACAGATTCAGGAGTTCAAAGAGGCCTTCAACATGATTGATCAGAACAGAGATGGTTT  
CATCGACAAGGAAGATTTGCATGATATGCTTGCTTCTTTAGGGAAGAATCCAAGTATGAGTATCTAGATGCCAT  
GATGAATGAGGCTCCAGGCCCCATCAATTTACCAIGTTTCCTCACCATGTTTGGTGAGAAGTTAAATGGCACAGA  
TCCTGAAGATGTCATCAGAAATGCCTTTGCTTGCTTTGATGAAGAAGCAACTGGCACCATACAGGAAGATTACTT  
GAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAGCTGTACAGAGAAGCACCTAT  
TGATAAAAAGGGGAATTTCAATTACATCGAGTTACACGCATCCTGAAACATGGAGCCAAAGACAAAGATGACTG  
AAATAACTTCAAATCCAGCCAAACGTTCTTGTTGCCACTTTGGGIATTCTGAGATTTTCTCTTGATGCCCTT  
AGCTTTACAGCTTTTGCAATTCCTGTTGTATTTATTCTCAGCCATTTTGGGCATATGTATCTTTATAATCAGACT  
GGAAACGGGACTTTCTATTAATATCATTTTCAGAATAAAAAATAGGGTAATTTAACCTACCAGCCCTTCTCCCCC  
AATAACTGTGGTCTATACAGAGTCAATATATTTTTTCAGAGAAAGTTATTCGCTCGATTTTTTCTGAATCATAAT  
TAACTTTATGATAAAATA

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**FIGURE 5029**

MSSKRTKTKTKKRPFQRATSNVFAMFDQSQIQEFKEAFNMIDQNRDGFIDKEDLHDMLASLGKNPTDEYLDAMMNE  
APGPINFMTFLTMTFGEKLNQIDPEDVIRNAFACFDEEATGTIQEDYLRELLTTMGDRFTDEEVDELYREAPIDKK  
GNFNYIEFTRILKHGAKDKDD

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**FIGURE 5030**

ATGCACGCACACACGCATACAGACACCACACACGAGAGAGAGAGATACAAAAGCAGACCAGAGGCACCTTTTAGA  
CTGACACATGAGTGGATTTCGGAGTCTGCAGGTTGCAGCAGAGGAAACTGTGAGCTGGAGAGGCAACCTCATTCT  
AGCAGCGGCAGAGTTTTGGGGCCTCTTTGGAGACAGGGACGTGGGCACAGGGATCTAATGGAGACAGCCCATCAG  
CCTGCAGAAGGAACCAGGTCATTGGCCCTGGCAGATCCTTCTGCCCATAGCCTGCTATTGGGTTCTGATAACATC  
CAGGACTCAGGACTCAGCTTTGACTTTGCTTTTGGCTGCCCCGTATTAGACATGAACTTGAAAAAGGAGGCAACA  
CTTCACGATCGTTTGAGAGAACAACACAGGCAAATTTGGAATCAGACTCTTCACATTCAAAATCAAAAAGCCTC  
TGTAAGTTTGAACCTCAATGGAAAACATGAAAAGGTGAACAGTCAGCCCAGGCAAAAGGCAATCATGTTCAAGACC  
TTGAGCACCCCTAGACCCTGACTGTGCAAGATTGAAAGGACGACTGCTTCTCCTAAGCCTCAGAGCCTTGCTCTT  
TGCATTACAGCAGGATAATGAATCTAGATTTTATTTCTGTTCTTTGCCCAGACTTGTACAGCAGGCAAAGTGTGTTG  
AAAATCAAAGGAAAAGAAGATATTGACTTGGATAATCTCTTCAGAGAGGCCATGGAGGGAAACCAGGAGTGTCTC  
ACTGAACTTGTGAAGAAGCCACAGCCAAGCCCTGGGGCCAGTCATCCTGCAGCAGTGACCACTCCCCGGCAGGG  
AGTGCAGCCAATACAGACAGTGGTGTGGAAATGACTGGCAATGCAGGGGGCAGCACTGAAGACCTCTCCAGCTTG  
GACGAGGGACCTTGCAATTGCTGGCACTGGTCTGTCCACTCTTCGCCGCCTTGAGAACCTCAGGCTGGACCAGCTA  
CATCAACTCCGGCCAATAGGGACCCGGGTCTCAAACCTGCCCAGCTTGTCCACACCGGTGAGACCTGGGTGTGG  
GAGTGCTTGCCAAAGTTGCGGACTGCCAACCACAGCTGGTACTGTCCAGGGCCTGCCCTGAGCACACTGACATCT  
GCCCCGTGCTGAAGATGCAAAGCCTGTTGCAGCAGGAGCTGCTGGCACCAGCCCTGATCATTCCCTCCTTTTGCAA  
TGCCCTCAGCTCTTTTTATTTCATCTGTTGTTCTATGATAGGCTGCTCTCCCCACGTTTCTGATAATTATGGGGTA  
AAACCGGGAAGGCTGCAGACATCAGAGGAGAGCTCTATATTCTCCTACTTTAAAATGTTGCCTAAGACAAGCAAC  
AAACTCAATGTACTTTGCCCTCTGAGAGAGCTCAGAATCCTTGTCTCAGGAATCATGCGATCAATGCAAAGGAG  
CTCGCCATGATCGCCACCGCGGCCTGCTAAGGATTTCCGCCAGAAAGCAGGATCCACTCCGCCCCCAAGCCAG  
ATACCCAAGCGCAAGCGGAAAGCCAAGAAGAGGCGCAAGAACGACGTGGTGGTGGTTAATGTGTTGGAGCACTA  
AATACGACTTGA



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**FIGURE 5031**

AGAGCTTCTTTGAAGGGCAGTCTGCACCATGGGACTCGGCTAAGAAAGATGAGAACAGAATGAAGAACAGATACG  
GGAATATCATTGCATACGATCATTCCCGAGTGAGGCTGCAGACAATAGAAGGAGACACAACTCAGACTATATCA  
ATGGCAATTATATCGATGGTTATCATCGACCCAATCATTACATTGCTACCCAAGGGCCAATGCAGGAAACCATCT  
ATGACTTCTGGAGGATGGTGTGGCAGGAAAACACTGCAAGTATCATCATGGTGACCAATCTTGTGGAAGTGGGAA  
GGGTCAAATGCTGCAAATACTGGCCAGATGACACAGAGATATATAAAGACATTAAAGTTACCCTAATAGAAACAG  
AACTACTGGCAGAATATGTGATAAGAACATTTGCTGTGAAAAGAGAGGTGTGCATGAAATCCGAGAGATCAGAC  
AGTTTCACTTCACTGGCTGGCCGGATCATGGGGTCCCTACCATGCCACCGGCCTGCTGGGATTTCGTGCGGCAAG  
TCAAGTCCAAGAGCCCGCCAGTGCAGGCCCCTGGTGGTGCAGTGCAGTGGTGCAGGAGGACTGGCTGTT  
TCATCGTCATTGATATCATGTTGGACATGGCCGAAAGGGAAGGGGTCGTAGACATCTACAACCTGCGTCAGGGAGC  
TGCGGTACGGAGGGTGAACATGGTGCAAACAGAGGAGCAGTATGTGTTTATCCACGATGCATCCTGGAAGCCT  
GTCTTTGTGGGGACACCTCTGTGCCTGCTTCCCAAGTTAGGTCTCTGTATTATGACATGAACAACTGGATCCAC  
AGACAACTCAAGCCAGATTAAAGAGGAATTCGGACGCTAAACATGGTGACACCAACGCTGCGAGTAGAGGACT  
GCAGCATCGCACTGTTGCCCGGAACCATGAGAAAAACCGGTGCATGGACATCCTGCCCCAGACCGCTGCCTGC  
CCTTCTCATCACCATCGATGGGGAGAGCAGCAACTACATCAATGCTGCCCTCATGGACAGCTATAAACAGCCTT  
CAGCTTTTATAGTCACCAGCATCCTTTGCCAAACACAGTGAAAGACTTTTGAGACTGGTCTGGATTATCACT  
GCACATCCGTAGTTATGCTAAATGATGTGGATCCTGCCAGTTGTGTCCACAGTACTGGCCAGAAAACGGAGTAC  
ACAGACACGGCCCCATCCAGGTGGAATTTGTCTCTGCTGACCTGGAAGAGGACATCATCAGCAGGATATTCCGCA  
TTTACAATGCCGCCAGACCCCAAGATGGATATCGGATGGTGCAGCAATTCCAGTTTCTGGGCTGGCCGATGTACA  
GGGACACACCAAGTGTCTAAGCGCTCCTTCTTGAAGCTCATTCGCCAGGTGGACAAGTGGCAAGAGGAGTACAATG  
GCGGGGAAGGCCGCACGGTTGTGCACGCTTGAACGGGGGAGGCCGAGTGGGACGTTCTGCGCCATCAGCATCG  
TATGTGAGATGCTCCGGCACCAGAGAACCGTGGATGTCTTTCACGCTGTGAAGACACTGAGGAACAACAAGCCCA  
ACATGGTTCGACCTCCTGGATCAGTACAAGTTCTGCTACGAGGTGGCCCTGGAATACTTGAATTCTGGCTGATGGT  
GTAAACAGCTCTGCAAACAATCCCTTTTCATACCACAAAGCCAAGACGTTCCATGGTATTTGTGCAAAAGAGATGA  
AGACTTCTCAATATGCTTATTTTGTCTTTGCATAATTGGCTCTTTTTAAGAGCCCAAGAAAGTGTCTTAAAATTG  
CTTGCACTGCCCAATCCAGTAATGCTGCTGCCTGACAGAAACACACACAGCCACAGTTGCCAAATCCCGTAC  
TCCTTGCCACCGGCTTCCCTAGAGCAGCGTAGACAGCTGGTAAACTGAAGAGCACAACTATATTCTTATGAAGGAA  
TTTGTACCTTTGGGGTATTATTTTGTGGCCCGTGACCTCGTTATTGTTACAGCTGAGTGTATGTTTTTGTCTG  
TGGAGAATGCTATCTGGCATTATGGTAATATATTATTTAGGTAATATTTGTACTTTAACATGTTGCATAATATA  
TGCTTATGTAGCTTTCCAGGACTAACAGATAAATGTGTAATGAACAAAGATATGTTGTATGAGTCGTCGTTTCTG  
TCAGATTTGTATTGTTTCCAAGGGAAAAGCTTGGGGGAGGACTCAGTTCACAAAATGCAAACTCAACGATCAGA  
TTCACGGACCCAGAGCTTTTCCATGTGTTTATATTGTAAATATTTTGATTTCATCAAATTATTTATTCATTA  
AGAAATTTTGTG

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**FIGURE 5032**

CGGAGGGTGGGGAGCGGAAAGCAGGACGCACGGCTCCCGCGGCCCGCTGGCTGCCCTTCCCGCCAGCGCAGGTGT  
GGGACGGGCGGCGGACTAGGCACAGAGCTGCGGGAGCAGGCACAGGGAGTGTGGAGCCTGGCGGCGGGACGGCGG  
GATCCGGTGGGAGCCCGGAGTCCCGCCGAGGGGGCTGGAGGTGGAGGGGCCCGGCGAGGCCGCGATGAAGCCGAG  
CGGCGAGGACCAGGCGGCGCTGGCGGCGGCCCTGGGAGGAGTGTTCAGGCGGCCGTGCAGCTGGCGCTGCG  
GGCAGGACAGATCATCAGAAAAGCCCTTACTGAGGAAAAACGTGTCTCAACAAAACATCAGCTGCAGATCTTGT  
GACAGAAACAGATCACCTTGTGGAAGATTAAATTATTTCTGAGTTGCGAGAGAGGTTTCCTTCACACAGGTTTAT  
TGCAGAAGAGGCCGCGGCTTCTGGGGCCAAGTGTGTGCTCACCCACAGCCCGACGTGGATCATCGACCCCATCGA  
CGGCACCTGCAATTTTGTGCACAGATTCCCGACTGTGGCGGTTAGCATTGGATTGTGCTGTTGACAAGAGCTTGA  
ATTCCGAGTGATTTACCACTGCACAGAGGAGCGGCTGTACACGGGCCGCGGGGTGCGGGCGCCTTCTGCAATGG  
CCAGCGGCTCCGGGTCTCCGGGGAGACAGATCTCTCAAAGGCCTTGTTCTGACAGAAATTGGCCCCAAACGTGA  
CCCTGCGACCCCTGAAGCTGTTCTGAGTAACATGGAGCGGCTGCTGCATGCCAAGGCGCATGGGGTCCGAGTGAT  
TGGAAGCTCCACATTGGCACTCTGCCACCTGGCCTCAGGGGCCGCGGATGCCTATTACCAAGTTTGGCCTGCACTG  
CTGGGATCTGGCGGCTGCCACAGTCAATCATCAGAGAAGCAGGCGGCATCGTGATAGACACTTCGGGTGGACCCCT  
CGACCTCATGGCTTGACAGAGTGGTTGCGGCCAGCACCCGGGAGATGGCGATGCTCATAGCTCAGGCCTTACAGAC  
GATTAACATATGGGCGGGATGATGAGAAGTGAAGTGCAGGCTGCTCCCAAGGCCTCCCTGGGCTGCT  
GTGGGCTCCTGGGGAGGTGGCCCTCGTGGCCCACGCTCCATGCCAGTGGCTCACGCTCTGCTCCTGGCTACCCCA  
GAGGGAGTTGTACGCTACAGTGAAGTGGCTGGCCTTTTAAATCGACGTCTCTCTACCAGGATTGGTGTGTTAGC  
TGTTTCTCTCTTTAATCTCACGTAGCCTTTTTTCAAGTTAGTACGTGTTCTTCTGTGAGGGCCAAAACCAAATCT  
CCTGTGAAATACGTATTGATAATCCAATCTTGATTTTCCCCCAGAATATAAATCTCAGGTAATAAGGCTTTAG  
AACTGCTGATAAAGCGGATCGTTCTCAGGCCCTCCCCCGGAGTACTTCAGAATGCAATAAATCAAATAATGGC

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**FIGURE 5033**

MKPSGEDQAALAAGPWEECFQAAVQLALRAGQIIRKALTEEKRVSTKTSAADLVTETDHLVEDLIISELRERFPS  
HRFIAEAAAASGAKCVLTHSPTWIIDPIDGTCNFVHRFPTVAVSIGFAVRQELEFGVVIYHCTEERLYTGRRGRGA  
FCNGQRLRVSGETDLSKALVLTEIGPKRDPATLKLFLSNMERLLHAKAHGVRVIGSSTLALCHLASGAADAYYQF  
GLHCWDLAAATVIREAGGIVIDTSGGPLDLMACRVVAASTREMAMLIAQALQTINYGRDDEK

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## FIGURE 5034A

GGCACGATTCTGGGTACAGGTGATGAGGGATTTGAGGAATGGGGTAAAACTTAAGAAGGTCCAAGAGCGGCAGTA  
CAACCCCTTTGCCCATTTGAATATCAGCTCACCCTTATGAGATGTTAATGGATGACATTTCGCTGCAAAAGATACAC  
CTTGCGAAAAGTGATGGTGAATGGTGATATTCCCCCTCGGTTAAAAAAGAGTGCTCATGAAATCATCTCGACTT  
CATCAGATCCAGACCTCCTTTAAATCCAGTCTCAGCCAGAAAACCTGAAACCAACTCCACCACGGCCACGGAGCCT  
CCATGAAAGAAATTAGAAAGAAATTAAGCAGAAAGAAAGCTGCGGCCTGTATCACCAGAGGAGATTAGACGTAG  
CAGATTAGATGTGACTACCCCTGAATCTACAAAGAATCTTGTGGAGTCATCTATGGTGAATGGAGGTTTGACATC  
ACAAACAAAAGAAAACGGGTTAAGTACCTCAGCAGAGGTGCCTGCACAGCGGAAGAAGCTCCTCAGAGCCCCAAC  
TCTGGCCGAACCTGGACAGCTCTGAGTCTGAGGAAGAAACGCTGCACAAGTCGACCAGCAGCAGCAGCGTGTCTCC  
CTCTTTCCCTGAAGAGCCAGTCTGGAGGCCGTGTCCACAAGGAAGAAGCCTCCAAAATTCTGCCCATATCATC  
AACACCCAGCCAGAGAGAGAGCCAGCCACCCAGAGACGACATTCCATTGAAAAGGAAACGCCCTACTAACGTGAG  
GCAGTTCTTGGCCCTTCCAGGCAGAGTTCCCGCTCTCTTGAGGAATTCTGCTACCCAGTGGAAATGCCTCGCTCT  
TACTGTGGAAGAAGTGATGCATATTCGCCAGGTCTGGTGAAGGCAGAGCTGGAAAAATACCAACAGTATAAAGA  
CATCTACACCCGCTTGAAAAAAGGAAAGCTCTGCTTTTGTGCGGAACCAAGGAGGTTTTCTCTTCACTTGGTC  
TTATACCTGTCCGTTCTGTAAAGAGCCGGTGTGCTCAGAGTGTGCAAAAAGATGCGGCTGCCCTCAAACCATA  
CTCCACTCTTCTATCTTTTTCATTGGGACCTTCTGCTCTGCAAGAGGGGAAAGTAGTATGAGGTGAGAAAAACC  
CTCCACTGCCCATCATCGGCCACTTCGGAGCATTGCCAGGTTCTCTCAAATCTAAGTCTATGGACAAATCAGA  
TGAAGAAGTCCAGTTTCCCAAAGAGTTGATGGAGGACTGGAGCACCATGGAGGTGTGTGGACTGCAAGAAGTT  
CATTTCGGAATCATCAGTTCAAGCCGGCGCAGTCTGGTGTGGCCACAAAAGGGCCCGATTGAAAAGGAAAC  
GCAGTCTTTTCTACATGTCCTCGCCAGGCCCTCGGAGTACTGCCCTTCAGAGAGGACGATCAGTGAGATCTGAGC  
CTCGTGCCCTTTCAGCTGCTTTTGTGCTACGAGTCAGCGTCCGTGCGCGAGGACACTGAGCCGGGCTGGCTCTCT  
TTCTGTGGTTTTATTTAATGGGCTTGAATTTGCATTAGATCAGATTTTGGCGCATCATTGTTCCACAGACTG  
AATGCTGTGTTTCGTATCGATTGATGAAACGTGACAGGTCCGCCAATTGCTCGTTGCACTGAGAGAGGACAACAG  
TTTGAAACTTACTTTTGTGTGTGTGGCTTTGGAAGCCAGTAGCTACTTCTTAGTTAGTTCTTTACTGTTC  
TCGAATAATCTCCTGACTAAGGCAAAAAAAGCTTCTCTACGAGAATCAGTCTAACAGAGATGCCGATGTC  
AGCAGAGCCCTAAGCAGTAAGTCATATTGGCATTTCACGTGACTGTGTTTCTATCCCGTGTACAGAGAGATCCA  
GAGCCCTACACTCCACGACCTGGGGGCTCAGAGCACAGAACCTAGAAGCACCTGCTGACACTCTTCAACTGATT  
TTAAATGTTGTTGCTTGGAGATAAAAAATTACATAAGGGACTTTTGCCTGCATTCTAGTGCAAAACATCTGAAGA  
GCTGTACACCCACAAGGGTGACTATTCCCTGAGTGGCCGTGTTGTCCAGTGCCCTGGTTCAGTGTCTCCTGA  
GTGGATGACAGGTCTTCACTCTATCTTGAATGTATTATGGTTACTAATAGTTTTATAATGGAGGTCTAAGAAT  
TAAAGTTGTGTGGGAGTTTCAGGACAAAGGAAGGCTAAAGTTGTCAAGACGTTGAGCGTATTTGGTTACCTA  
TGAGAAGGGTTGTGACAGTGTACAGTGGCAGCTGTTGGCCAGCTGCAGAAATGAGCTGGAGCTCATGGGTTTT  
AGCTACATTTTTTATACTTTGTAGTACATCCATCTTGAGTAAATTAAGCCACAATTTGGTACCTAGGGTCTCAA  
ACTAAAATTTATTTTTATAAATGAATTTTAAAGAAAAAATATCTACTTCTTTAAAGTTAGAAGAAAAATTAACC  
TGCTGACAGGCAACATTTTGGGGTGCTTTCTGCACTAGTTTCTTGTAAATGATTTGAGTGAGTAGGTTTGGT  
TTCTGACGAAAGTAGACTGGAGGGTAGCATTGTATGCCTCAAATGTCTCAGTGTGTTTGGCTCATACGTGGGCTA  
TACTGTATTATTTTGGTATGCTTACAAATGACTAACCAATCAAATTGTCATTAATGTTTGGAAAAATCTGTTAATG  
CACATGCACAATAATTTCTGAAAGCCATAGGACATGTCTGTAGTCAGCACCACGATAGCACCGTTTCATGAAAG  
GCATGGCGGCTGCATTTACATACCATCAAATACAGTAACATTTCTATACTAAATTAACAGTAATACCTCAAAA  
CTGCTCCGGTAGTAGTTTTTAATGGATTGAAATTTACAGTTTAGTAAAAGGCTTAAATTACTTATACTTATGAA  
ATAAATTTACCAGTTGACTAAAATAATGCATGTTAACAGTTGGTCTGTATTGTCATGTAAGAAGTGGGCCACCAG  
AGAACCCTTATTGATTACTTAAGTGTTTACATTATTTTAAAGACTCCTGTTTAAAGCTTTTCAAGATTGTACTGG  
GTGAATCTCATTATAAACTTCCTAAGAGACTATCTGAACCTATACTCCAGACAGTTAGGTGGGAGTATAAAT  
CTACCCCTTTTGATGACCCAGGCTTGAGTTTTTAAATGACTACCCAGAAGGGCACAAGGGGGAAGGAAATGGT  
ATTTGTATATGTATATAAATATGCACCTAGGAGAATGTGCTTTTTAAATAATGACTACTGTTTTTATTAATAACA  
TAAGAACTACACCCCAAAATAAGACTTTTCACTACATTACAAAGCAAACATCTAGTACATGTCTTCACTTC  
ACTTTATGATAGTGTATTGGATGATTTGGGCATTACGATCACCTCTTACCACAGCACAGAACATACATTCTTCAA  
CAGCATTAAACGGAGTTTGCCAAGTGCAATTAAGAGGTACGTGGAGGGTACGTTTATATGAAACATCTGCAGAA  
AGTGGGGTAAGAAAGGGCACATGGCACAGTTAAGTTGTAGAAATCAAATTACTATCATTTTTTGTGCCAAAAAC

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**FIGURE 5034B**

AAAGTCTTACATTTAACCCCCCTTTCTACCACCCCCCTCCACACTTCACGTCAGCTACATAGTTTCCACAGGGTA  
ATTCACCTAAGAGCTTGTGGAGCTTGGTTTTAAATCCTTAGCCTGGTCTGACTTTAGGCATAGCTTCCAGTTCTT  
CCTTCCGTGTCCTGGTTTCTTGTTCAGTTTTACTTCTAATCCAACAACAAAGAAATGTCTGGCTGGTCTCAGCT  
AGAGTCTGATGTGTCTTAGAGCATGTGTGCGTATCTGAACCATCATCCCTGCTCTCATCTCAGCTCCCTCCAGGC  
CTGAGCACCGGTTCCTTTTGTCCCATACGTCATGAAGTCACACTATTGGGAAACCTGTGCTTCCCTCTCCATGGC  
TTAACTCCCCTGTCAGTGTGCGAGTGTATAAGAATGCTTGTAATACTGTAATATATTTATTAATATTTGAAAGGC  
ATTCATTAGTGGACAGTGGGAATTAAGTCTCCCAAGGCAAGTGAAAATGAATGATTGACGTACGTTGATTTAAC  
AATCTTACTAGATTTTAATTCTTAAGGATTTCAAATGAAACCAGAAGGTGGTTATGTAAGAGGCTTAAAATGATC  
TTATGTTTAAAGAGATTCTGTTATTAGCACCATGAACCTGCTACTATGAAATTTTAAAGCCTTTTATTTTCTAAC  
TATATTACTGTAGGACTGGATATTAGGTGTCATATAGGAAACACAAAAGTTTATTGCTGTTTGCTAAAGCAAAAT  
AGCAGAAAATTTTGTATATGCAAACTGTTGAAGGACCATAGAGAAATGTGTACTACTGACGGGGCTTTTACTAG  
GCTTCCTGCGTGTGTAAAAGTCGAGGTATTGCTGGCATTGAGGGTGACATGATGGTACTAAATGTTTTCCATTAA  
AGTCTTCTATTTTAAATTTAGAGAAAATAAAATGGCTTTCCATCAG

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**FIGURE 5035**

MRDLRNGVKLKKVQERQYNPLPIEYQLTPYEMLMDDIRCKRYTLRKVMVNGDIPPRLKKSAAHEIILDFIRSRPPL  
NPVSARKLKPTPPRPRSLHERILEEIIKAERKLRPVSPPEIRRSRLAMRPLSMSYSFDLSDVTTPESTKNLVESM  
VNGGLTSQTKENGLSTSQQVPAQRKKLLRAPTLAELDSSESEEEETLHKSTSSSSVSPSFPEEPVLEAVSTRKKPP  
KFLPISSTPQPERRQPPQRRHSIEKETPTNVRQFLPPSRQSSRSLEEFQCPVECLALTVEEVMHIRQVLVKAEL  
KYQQYKDIYTALKKGKLCFCCRTRRFSTFTWSYTCQFCKRPVCSQCCKKMRLPSKPYSTLPIFSLGPSALQGES  
SMRSEKPSTAHHRPLRSIARFSSKSKSMDKSDEELQFPKELMEDWSTMEVCVDCKKFISEIISRRSLVLANKR  
ARLKRKTQSFYMSSPGPSEYCPSERTISEI

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**FIGURE 5036**

TTCTTTCTTGCCGTGCCGATAGCGCTCACGCAAGCATGGTTAACGTCCCTAAAACCCACCAGACTTTCTGTAAGA  
AGTGTGGCAAGCACCAACCCACAAAGTGACACAGTACAAGAAGGGCAAGGATTCTCTGTATGCCCAGGGAAAGT  
GGCGTTATAACAGGAAGCAGAGTGGCTATGGTGGGCAGACTAAGCCGATTTTCCAGAAAAAGGCTAAAACTACAA  
AGAATACTGTGCTAAGGCTTGAGTGCGTTGAGCCCACTGCAGATCCAAGAGAATGCTGGCTATTAAAAAGATGCA  
AGCATTTTGAAGTGGGAGGAGATAAGAAGAGAAAGGGCCAAGTGATCCCGTTCTAAGTGTATCTTTTATTATGA  
AGACAATAAAA

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**FIGURE 5037**

GGCACGAGGCAGACCATGAGGTTTAACTGAGTGAACACCGCTGTTCCGGGGCTCTGCCTCTCGCTGAACGCTCCT  
GCTGGGCTGGGGCCTCCCGAGTAGCTGGAAGTACAGATAATCACAGCTGGCTTATCAATATTGCTGTTTGATGCG  
ATCCTGACCAGTGCAACCACGGGATGCCTCCTGCTCGGTGCGCTTGGAGAGGCCCTGCTGGTTTTCTCAGAGCGG  
AAGAGCTCCTGAACAAGACGGTCAAGAGAAAGACTCACAGGCTGCTGCGGGAGAACAGCTTGTACACCTGTGTAC  
GAGCCCCTGGTCTCATAGCTCCCTGTTGGATGTGTCAGAAAGAGGAATGCAAGGACAGTGAGGCCAGGTGGGCAG  
TGCCATCACCCCTCACCCAAAGTGAATGTGGTGGTGGCTGATGAGGCCGAGGCCCTGGTGCTTCAAGGAGCACCCCTT  
TCTGGGGGTCTGCAGGTCACTGCAGAGGAGCGGTCTGTTACATCTTCCCATTGGAGAACCTCTCTCAACCGTGC  
TGTAGCTGGTTCTGCAGAAACAGGAAGTACAGGATTTTCATGGGCTGGCTCTGCTCGCCTCGACTGAGCTTCACAC  
CTCTGGATGCCACATGCTCTCTCCCAAACACTGCTTTCAGTGCAAGGTAGTGGGCCTAAGGGGTTTTGGTTGTCT  
TTTTTTTTTTTCATTTTTAAAAATTTTAAATTTTTATTATTATTTTTTAGAGACAAGGCCTCGCTCTATCGC  
CTAGGCTGAAGCACAGTGGTGCATCACAGCTCGCTGCAGCCTTGACCTCCTAGGATCAAGCCATCCTCCTGCCT  
CAGCATCCACAGTAGCTGATGTGCACCACCAGACCCGTCTCATTTTTTCTATTTTTATTATTTTAGAGATGGGGA  
TCTCACTGTGTGGCCAGGCTGGTCTCAAACCTCTGGGCTCAAGCAATCCTCCACCTTGGCCTCAAAGTATTGA  
GATTACAGGCATGAGCCACTGCACCCGGCCTTTCTCATTTTTTAAATTTGACAGACGTAACAGTGGCATT  
TATCAGGCACAAACAATGCTTTGGGAATGGTTAAATCTAGCTCACAAATGCATTACCTCACACGGTTGTCAATT  
TTGTGGTGAGGCTTGGTTGTATGTTTTGTTTCATTTCATGTTTTTACATCCTTGGAGTCTCCTCTGGGTCCGTCT  
TTCTTTGCTGTATGCTGGCTTGCCTAAGGCCACCCGACCTGCGTACGAGCATTTTAACTCTAGAGTGAGTG  
ACAGCCTTTTTATGGTTGGTGTACTATTTATTTCTGCCTCTAAACTTCTCGTGGTCTTATAAACTTGTCAAG  
ATGTGTGTTGCGTTGAATTCTGCATGTCCTTTTTTTGCCACCCTCAGGTTAAGCTGGTACTAACTTATCCCCAG  
AGGAAACAGGGTTTATGAGCACTGACAGATGTCTTCCCTGGGCAAAAAAAAAAAAAAAAAATAGTATATGTATACAC  
ACACACATACACATTTATATTTATTTCTTAAAGCTTTAATCCCTTTCATTCCCTGATATCTCAGAGATTCA  
AATCATTGAACACTGAAGTATATTTTCAGGCCAGATGAAAAATTGTATTAACCCCTATTCCTGGTCAGGCCGA  
GTGGCTCACGCCTATAATCCCAGCACTTTGGGAGGCCGAAGTAAGCAGATCACCTGAGGTGGGAGTTCAAGACA  
AACCTGGCCAACATGGTGAAACCCTGTCTCTACTAAACTACAAAAAATTAGCCTGATGTGGTGTGTGTGCCT  
GTAGTCCCAGCTACTTAGGAGGCTGAGGTAGGAGAATTGCTTGAACCTGGGAGGCGGAGGTTGCAGTGAGCCAAA  
ATTACGCCACTGCACTCCAGCCTGGGCAACAGAGCGAGACAGTCTCAAAAACAACAACAACAACAAAAACCCTAT  
TCCTTGCCCTTTGTAGGAGTCAAAATAAATGAACCTCTTTTTCTTTTTTTTATTATTATATCTTAAAGTCTGGGG  
TACACGTGCAGAATGTGCAGGTTTGTACATAGGTATGCACGTGCCATGGTGGTTTGCTGCACCCATCAACCTGT  
CACCTACATTAGGTATTTCCCTAATGTTATCCCTCCCTAGCCCTCCATCCCTGACAGGCCCTGGTGTGTGAT  
GTTCCCTCCCTATGTCCATGTGTTCTCATGTCTCCAAATAAATGAATTTACACAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAA



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**FIGURE 5038**

MPPARCAWRGLAGFLRAEELLNKTVKRKTHRLRENSLYTCVRAPGLIAPCWMQKEECKDSEARWAVPSPSPK

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**FIGURE 5039**

GAATTCCCCCCCCCCCCAGTGCTCCGCGCGCTCTTGACGTCCGGAGCCCCCTGGAGTAGGCGCTTCCGGCCATT  
CATACTGCAGTCGGTCAGTGTTTCGGTTGAAGGATTCTGTGTGCTGTCCGACCCAGAGGGTGACGGCGCCGCTAGG  
ATGAAGCTCGTGAGATTTTTGATGAAATTGAGTCATGAAACTGTAACCATTGAATTGAAGAACGGAACACAGGTC  
CATGGAACAATCACAGGTGTGGATGTCAGCATGAATACACATCTTAAAGCTGTGAAAATGACCCTGAAGAACAGA  
GAACCTGTACAGCTGGAAACGCTGAGTATTCGAGGAAATAACATTTCGGTATTTTATTCTACCAGACAGTTTACCT  
CTGGATACACTACTTGTGGATGTTGAACCTAAGGTGAAATCTAAGAAAAGGGAAGCTGTTGCAGGAAGAGGCAGA  
GGAAGAGGAAGAGGAAGAGGACGTGGCCGTGGCAGAGGAAGAGGGGGTCTAGGCGATAATGTCTCTCAAGATTT  
CAAAGTCATATGAGATTTGGGATATTTTTGTACAGGTTGTGTTTGTATGTCAGTTTTTAATAAACATAAATG  
TGGGACAGAGCTGTCTATTTAGTATATCAAAGTTTTAGTAGTTTCTCCACATTCACGAAATTACCACAGTGAGA  
GCTAAGCATTTCTACTGGGCAGTTTCATTTTTAGTTGATCAGGTTTTAAGTTTTTGAATAAAATTTTTCTTTTT  
CTTTTTATGATGAATAAGGTTAAATAAAAAGCCTTAGACAAATTAAATTTGGCAGAGTTTAATTGAGCAAAGGAC  
AATTCACAAATCAGGTAGCCCCCTGAACCATAATAGGCTCAGAGGCTTCAGCCCAGCTGCATAGTTGAAGATTTAT  
GGACAGAAGGAAAGTGATGTATGAAAATGGAAGTGAGATACAGCAACAGCCGGATTAGTTACAGTTCAGCGTTT  
GCCTTATTTGAATATGGTTTGAACAGTTCGCTGTCTTTGGTTGGCTGAAACTTAGTGATTGCCACAAGAGTAGGG  
TACCGTCTGTTTACACGTCCAGTTAGGCTACAGTTCTATGTACTGAGAAACCTTTAAGCTGAACTGAGATATGT  
AAAGAGACTTTAGGCTAAACTTAACAATATATATAGGAATATATCCCTTCTACTTCACATGCACTGAATATGCAT  
TTTATTGCTTTACTCTTCATTCTGTGGCACCTACCCACAGGGGAAGTAAGAAGTTTGTTTTGGTATTTCCGAAAC  
TAAAGTCCTTATGGGATGGGGTCTAGAATTGATTCTCCTTTCTGAGTTTTACTCCACGGAGTCTTAGGTACCTG  
GTAAAAAGTTGTCTTCTAAATTAAGGGTCATTGCTTTGTTGTCTAGCTGCTAATGTCTTACTTTTGTCTTTTG  
CTTTTTAATCAGTTCTTAATAGGATATAGTTTTATGTTTTCCAAGTTATAACTTGGAGTTAATGGTCACTAGATT  
ATCAGTTATGAGCAGTGTTAAATCTCCTATTAATGTGTAATGTACCTGTCAGTGCCTCCTTTATTAAGGGGTTT  
TTTGAGAATAAAAGAGAAAAGACCTACTTTATTTGACAGCAAAAAAAAAAAGGAATTC

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## FIGURE 5040A

ATGGGATGGCTGTGGATCTTTGGGGCAGCCCTGGGGCAGTGTCTGGGCTACAGTTCACAGCAGCAAAGGGTGCCA  
TTTCTTCAGCCTCCCGGTCAAAGTCAACTGCAAGCGAGTTATGTGGAGTTTAGACCCAGCCAGGGTTGTAGCCCT  
GGATACTATCGGGATCATAAAGGCTTGATACCGGACGGTGTGTTCCCTGCAATTGCAACGGACATTCAAATCAA  
TGCCAGGATGGCTCAGGCATATGTGTTAACTGTCAGCACAACACCGCGGGAGAGCACTGTGAACGCTGCCAGGAG  
GGCTACTATGGCAACGCCGTCCACGGATCCTGCAGGGCCTGCCCATGTCTCACAATAACAGCTTTGCCACTGGC  
TGTGTGGTGAATGGGGGAGACGTGCGGTGCTCCTGCAAAGCTGGGTACACAGGAACACAGTGTGAAAGGTGTGCA  
CCGGGATATTTCCGGGAATCCCCAGAAATTCGGAGGTAGCTGCCAACCATGCAGTTGTAACAGCAATGGCCAGCTG  
GGCAGCTGTCTATCCCTGACTGGAGACTGCATAAACCAAGAACCCAAAGATAGCAGCCCTGCAGAAGAATGTGAT  
GATTGCGACAGCTGTGTGATGACCCTCCTGAACGACCTGGCCACCATGGGCGAGCAGCTCCGCCTGGTCAAGTCT  
CAGTGCAGGGCCTGAGTGCCAGCGCAGGGCTTCTGGAGCAGATGAGGCACATGGAGACCCAGGCCAAGGACCTG  
AGGAATCAGTTGCTCAACTACCGTTCTGCCATTTCAAATCATGGATCAAAAAATAGAAGGCCCTGGAAAGAGAACTG  
ACTGATTTGAATCAAGAATTTGAGACTTTGCAAGAAAAGGCTCAAGTAAATTCAGAAAAGCACAAACATTAAAC  
AACAATGTTAATCGGGCAACACAAAGCGCAAAAGAACTGGATGTGAAGATTAAAAATGTATCCGGAATGTGCAC  
ATTCTTTTAAAGCAGATCTCTGGGACAGATGGAGAGGGAAACAACGTGCCTTCAGGTGACTTTCCAGAGAGTGG  
GCTGAAGCCCAGCGCATGATGAGGGAACGCGGAACAGGAACCTTTGGAAAGCACCTCAGAGAAGCAGAAGCTGAT  
AAAAGGGAGTCGCAGCTCTTGCTGAACCGGATAAGGACCTGGCAGAAAACCCACCAGGGGGAGAACAAATGGGCTT  
GCTAACAGTATCCGGGATTCTTTAAATGAATACGAAGCCAAACTCAGTGACCTTCGTGCTCGGCTGCAGGAGGCA  
GCTGCCAAGCCAAGCAGGCAAAATGGCTTGAACCAAGAAAACGAGAGAGCTTTGGGAGCCATTAGAGACAAGTG  
AAAGAAATAAATTCCTGCAGAGTGATTTACCAAGTATCTAACCACTGCAGACTCATCTTTGTGCAAACCAAC  
ATTGCGCTGCAGCTGATGGAGAAAAGCCAGAAGGAATATGAAAAATTAGCTGCCAGTTTAAATGAAGCAAGACAA  
GAACTAAGTGACAAAGTAAGAGAACTTTCCAGATCTGCTGGCAAACATCCCTTGTGGAGGAGGCAGAAAAGCAC  
GCGCGGTCCTTACAAGAGCTGGCAAAGCAGCTGGAAGAGATCAAGAGAAACGCCAGCGGGGATGAGCTGGTGCGC  
TGTGCTGTGGATGCCGCCACCGCCTACGAGAACATCCTCAATGCCATCAAAGCGGCCGAGGACGCAGCCAACAGG  
GCTGCCAGTGCATCTGAATCTGCCCTCCAGACAGTGATAAAGGAAGATCTGCCAAGAAAAGCTAAAACCTGAGT  
TCCAACAGTGATAAACTGTTAAATGAAGCCAAGATGACACAAAAGAAGCTAAAGCAAGAAGTCAGTCCAGCTCTC  
AACAACCTACAGCAAACCTGAATATTGTGACAGTTCAGAAAAGAGTGATAGACCAATCTCACAACCTCTCCGA  
GATGGTCTTCATGGGATACAGAGAGGTGATATTGATGCTATGATCAGTAGTGCAAAGAGCATGGTCAGAAAGGCC  
AACGACATCAGAGATGAGGTTCTGGATGGGCTCAACCCCATCCAGACAGATGTGGAAGAATTAGGACACCTAT  
GGGAGGACACAGAACGAAGACTTCAAAAAGGCTCTGACTGATGCAGATAACTCGGTGAATAAGTTAACCAACAAA  
CTACCTGATCTTTGGCGCAAGATTGAAAGTATCAACCAACAGCTGTTGCCCTTGGGAAACATCTCTGACAACATG  
GACAGAATACGAGAACTAATTCAGCAGGCCAGAGATGCTGCCAGTAAGGTTGCTGTCCCCATGAGGTTCAATGGT  
AAATCTGGAGTCGAAGTCCGACTGCCAAATGACCTGGAAGATTGAAAGGATATACATCTCTGTCTTGTCTC  
CAAAGGCCCAACTCAAGAGAAAATGGGGTACTGAGAATATGTTTGTGATGTACCTTGGAAATAAAGATGCCTCC  
CGGGACTACATCGGCATGGCAGTTGTGGATGGCCAGCTCACCTGTGTCTACAACCTGGGGGACCGTGAGGCTGAA  
CTCCAAGTGACCAGATCTTGACCAAGAGTGAGACTAAGGAGGCAGTTATGGATCGGGTGAAATTCAGAGAATT  
TATCAGTTTGCAAGGCTTAATTACACCAAGGAGCCACATCCAGTAAACCAGAAACACCCGGAGTCTATGACATG  
GATGGTAGAAATAGCAATACACTCCTTAATTTGGATCCTGAAAATGTTGTATTTTATGTTGGAGGTTACCCACCT  
GATTTTAACTTCCAGTCGACTAAGTTTCCCTCCATACAAAGGTTGTATTGAATTAGATGACCTCAATGAAAAT  
GTTCTGAGCTTGTAACACTTCAAAAAACATTCAATCTCAACACAAGTGAAGTGGAGCCTTGTAGAAGGAGGAAG  
GAAGAGTCAGACAAAATTTTGAAGGTACGGGCTATGCTCGAGTTCCAACCTCAACCACATGCTCCCATCCCA  
ACCTTTGGACAGACAATTCAGACCACCGTGGATAGAGGCTTGTGTTCTTTGCAGAAAACGGGGATCGCTTCATA  
TCTCTAAATATAGAAGATGGCAAGCTCATGGTGAGATACAACTGAATTCAGAGCTACCAAAAGAGAGAGGAGTT  
GGAGACGCCATAAACAACGGCAGAGACCATTGATTGATCAAAATTTGAAAACCTCAAAAAGCGTATGTGGATA  
AATGTGGACGTTCAAAACACTATAATTGATGTTGAAGTATTTGATTTAGCACATATTATCTGGGAGGAATTCCA  
ATTGCAATCAGGGAAGATTTAACATTTCTACGCCTGCTTTCCGAGGCTGCATGAAAAATTTGAAGAAAACAGT  
GGTGTCTGATTGATGAATGATCTGTGGGAGTAACCAAAAAGTCTCGGAAGACTGGAAGCTTGTGCGATCTGCC  
TCATTCTCAGAGGAGGACAATTGAGTTTCTAGTATTTGGGCTTACCACCTACTGACCACCTCCAGGCCTCATTT  
GGATTTACAGACCTTTCAACCCAGTGGCATATTATTAGATCATCAGACATGGACAAGGAACCTGCAGGTCACTCTG

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**FIGURE 5040B**

GAAGATGGTTACATTGAATTGAGCACCAGCGATAGCGGCGGCCCAATTTTAAATCTCCACAGACGTATATGGAT  
GGTTTACTGCATTATGTATCTGTAAATAAGCGACAACCTCTGGACTACGGCTTCTCATCGATGACCAGCTTCTGAGA  
AATAGCAAAAGGCTAAAACACATTTCAAGTTCCCGGCAGTCTCTGCGTCTGGGCGGGAGCAATTTTGAGGGTTGT  
ATTAGCAATGTTTTTGTCCAGAGGTTATCACTGAGTCCTGAAGTCCTAGATTTGACCAGTAACTCTCTCAAGAGA  
GATGTGTCCCTGGGAGGCTGCAGTTTAAACAAACCACCTTTTCTAATGTTGCTTAAAGGTTCTACCAGGTTTAAAC  
AAGACCAAGACTTTTTCGTATCAACCAGCTGTTGCAGGACACACCAGTGGCCTCCCCAAGGAGCGTGAAGGTGTGG  
CAAGATGCTTGCTCACCCTTCCCAAGACCCAGGCCAATCATGGAGCCCTCCAGTTTGGGGACATTCCCACCAGC  
CACTTGCTATTCAAGCTTCTCAGGAGCTGCTGAAACCCAGGTCACAGTTTGCTGTGGACATGCAGACAACATCC  
TCCAGAGGACTGGTGTTCACACGGGCACTAAGAATCCTTTATGGCTCTTTATCTTTCAAAGGACGTCTGGTC  
TTTGCCTGAGGACAGATGGGAAAAATTGAGGATCAAAAGCAAGGAGAAATGCAATGATGGGAAATGGCACACG  
GTGGTGTGTTGGCCATGATGGGAAAAGGGCGCTTGGTTGTGGATGGACTGAGGGCCCGGGAGGGGAAGTTTGCCT  
GGAACTCCACCATCAGCATCAGAGCGCCAGTTTACCTGGGATCACCTCCATCAGGGAAACCAAGAGCCTCCCC  
ACAAACAGCTTTGTGGGATGCCTGAAGAACTTTCAGCTGGATTCAAACCCCTGTATACCCCTTCTTCAAGCTTC  
GGGGTGTCTTCTGCTTGGGTGGTCTTTGGAGAAAGGCATTTATTTCTCTGAAGAAGGAGGTCATGTCGTCTTG  
GCTCACTCTGTATTGTTGGGGCCAGAATTTAAGCTTGTTCAGCATCCGCCCAAGAAGTCTCACTGGGATCCTA  
ATACACATCGGAAGTCAGCCCGGAAGCACTTATGTGTTTACCTGGAGGCAGGAAAGGTACAGGCCTCTATGGAC  
AGTGGGGCAGGTGGGACCTCAACGTCGGTCACACCAAGCAGTCTCTGTGTGATGGACAGTGGCACTCGGTGGCA  
GTCACCATAAAACAACACATCCTGCACCTGGAAGTGGACACAGACAGTAGCTACACAGCTGGACAGATCCCCTTC  
CCACCTGCCAGCACTCAAGAGCCACTACACCTTGGAGGTGCTCCAGCCAATTTGACGACACTGAGGATCCCTGTG  
TGGAATCATTCTTTGGCTGTCTGAGGAATATTATGTCAATCACATCCCTGTCCCTGTCACTGAAGCCTTGGA  
GTCCAGGGGCTGTGAGTCTGAATGGTTGTCCTGACCAGTAACCCCAAGCCTATTTACAGCAAGGAAATTCACCT  
TCAAAGCACTGATTACCCAATGCACCTCCCTCCCCAGCTCGAGATCATTCTTCAATTAGGACACAAACCAGACA  
GGTTTAAATAGCGAATCTAATTTGAATTCTGACCATGGATACCCATCACTTTGGCATTGAGTGTACATGTGTAT  
TTTATATAAAAAATCCCATTCTTGAAGATAAAAAAATTGTTATTCAAATTGTTATGCACAGAATGTTTTGGTAA  
TATTAATTTCCACTAAAAAATTAAATGTCTTTT

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**FIGURE 5041**

MGWLWIFGAALGQCLGYSSQQQRPVFLQPPGQSQLQASYVEFRPSQGCSPGYRDKGLYTGRCVPCNCNGHSNQ  
CQDGSIGVCVNCQHNTAGEHCERCQEGYYGNAVHGSCRACPCPHNTNSFATGCVVNGGDVRCSCKAGYTGTCERCA  
PGYFGNPQKFGGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDDCSCVMTLLNDLATMGEQLRLVKS  
QLQGLSASAGLLEQMRHMETQAKDLRNQLLNYSASISNHGSKIEGLERELTDLNQEFETLQEAQVNSRKAQTLN  
NNVNRATQSAKELDVKIKNVIRNVHILLKQISGTDGEGNNVPSGDFSREWAEAQMMRELNRNFGKHLREAEAD  
KRESQLLLNRIRTWQKTHQGENNGLANSIRDLSNEYEAKLSDLRLARLQEAQAQANGLNQENERALGAIQRQV  
KEINSLQSDFTKYLTTADSSLLQTNIALQLMEKSQKEYEKLAAASLNEARQELSDKVRELSRSAGKTSLVEEAKEH  
ARSLQELAKQLEEIKNASGDELVRCAVDAATAYENILNAIKAAEDAANRAASASESALQTVIKEDLPRKAKTLS  
SNSDKLLNEAKMTQKKLKQEVSPALNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKA  
NDITDEVLDGLNPIQTDVERIKDTYGRQNEDEFFKALTDADNSVNKLTKLPDLWRKIESINQQLPLGNISDNM  
DRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYSLSLFLQRPNSRENGGTENMFVYMLGNKDAS  
RDYIGMAVVDGQLTCVYNLGDREAELQVDQILTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPEPTGVYDM  
DGRNSNTLLNLDPENNVFVYGGYPPDFKLPSRLSFPYKGCIELDDLNNVLSLYNFKKTFNLNTEVEPCRRRK  
EESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIEDGKLMVRYKLNSELPKERGV  
GDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEVDFDSTYYLGGIPIAIRERFNISTPAFRGCMKNLKKTS  
GVVRLNDTVGVTKKCEDWKLVRASFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTI  
EDGYIELSTSDSGGPIFKSPQTYMDGLLHYVSVISDNSGLRLLIDDQLLRNSKRLKHISSSRQSLRLGGSNFEGC  
ISNVFVQRLSLSPEVLDLTSNSLKRVDVSLGGCSLNKPPFLMLLKGSTRFNKTKTFRINQLLQDTPVASPRSVKVV  
QDACSPLEKTOANHGALQFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNFSMALYLSKGRV  
FALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKSLP  
TNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLHSAVLLGPEFKLVFSIRPRSLTGIL  
IHIGSQPGKHLVCVYLEAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDDSSYTAGQIPF  
PPASTQEPLHLGGAPANLTLRIPVWKSFFGCLRNHVNHPVPVTEALEVQGPVSLNGCPDQ

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**FIGURE 5042**

CCTTTCTGCCC GTGGACGCCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCACCCGTGCCGTCATGTCTAAGTCAGA  
GTCTCCTAAAGAGCCC GAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACTGATGAGAGCCT  
GAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAG  
GGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGT  
GGAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAATTTTGGG  
GGCAGAACTCTGGCCCCTATGGCGGTGGAGGCCAGTACTTTGCAAAACCACGAAACCAAGGTGGCTATGGCGGT  
TCCAGCAGCAGCAGTAGCTGTGTCAAGTGGCAGAAGATTTTAATTAGGAAACAAAGCTTAGCAGGAGAGGAGAGCC  
AGAGAAGTGACAGGGAAGCCACAGGTTACAACAGATTTGTGAAGTCAAGCCAGCACAGTGGTGGCAGGGCCTAGC  
TGCTACAAAGAAGACATGTTTGTAGACAAATACTCATGTGTATGGGCAAAAACTCGAGGACTGTGTTTGTGACTA  
ATTGTATAACAGGTTATTTTAGTTTCTGTTCTGTGGAAAGTGTAAGCATTCCAACAAAGCGTTTTAATGTAGAT

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**FIGURE 5043**

CCTTTCTGCCCCTGGACGCCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCACCCCTGCCGTCATGTCCTAAGTCAGA  
GTCTCCTAAAGAGCCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACCTGATGAGAGCCT  
GAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAG  
GGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGA  
TGGAAGAGTTGTGGAACCAAAGAGAGCTGTCTCCAGAGAAGATTCTCAAAGACCAGGTGCCCACTTAAGTGTGAA  
AAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAAGAGATTATTTGAAACAGTATGGTGG  
AAGCAATTTTGGAGGTGGTGAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCAT  
GAAGGGAGGAAATTTTGGAGGCAGAACTCTGGCCCCTATGGCGGTGGAGGCCAGTACTTTGCAAAAACACGAAA  
CCAAGGTGGCTATGGCGGTTCCAGCAGCAGCAGTAGCTGTGTGTCAGTGGCAGAAGATTTTAATTAGGAAACAAAGC  
TTAGCAGGAGAGGAGAGCCAGAGAAGTGACAGGGAAGCCACAGGTTACAACAGATTTGTGAACTCAGCCAAGCAC  
AGTGGTGGCAGGGCCTAGCTGCTAC

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**FIGURE 5044**

MSKSKSPKEPEQQRKLFIGGLSFETTDESLRSHCEQWGMLTDCVVMRDPNFKHSRGC GFV TYATVEEVDAAMNAR  
PHKVDGRVVEPKRAVSREDSQRPGAHLTVKKIFVGGIKEDTEEHHLRDYFEQLEAILQVVEATVILAITTISLQI  
LDP



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**FIGURE 5045**

CCTTTCTGCCCGTGGACGCCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCACCCTGCCGTCATGTCTAAGTCAGA  
GTCTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAAGTATGAGAGCCT  
GAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAG  
GGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGA  
TGGAAGAGTTGTGGAACCAAAGAGAGCTGTCTCCAGAGAAGATTCTCAAAGACCAGGTGCCCCACTTAAGTGTGAA  
AAAGATATTGTGGTGAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGG  
GAGGAAATTTTGGAGGCAGAACTCTGGCCCCCT

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**FIGURE 5046**

CCTTTCGCCCCGTGGACGCCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCACCCGTGCCGTCATGTCTAAGTCAGA  
GTCTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACCTGATGAGAGCCT  
GAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAG  
GGGCTTTGGGTTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGA  
TGGAAGAGTTGTGGAACCAAGAGAGCTGTCTCCAGAGAAGATTCTCAAAGACCAGGTGCCCACTTAACTGTGAA  
AAAGATATTTGTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAAGAGATTATTTTGAACAGTATGGAAA  
AATTGAAGTGATTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGA  
CCATGACTCCGTGGATAAGATTGTCAATCAGAAATACCATACTGTGAATGGCCACAACCTGTGAAGTTAGAAAAGC  
CCTGTCAAAGCAAGAGATGGCTAGTGCCTCATCCAGCCAAAGAGGTCGAAGTGGTTCTGGAACTTTGGTGGTGG  
TCGTGGAGGTGGTTTTCGGTGGGAATGACAACTTCGGTTCATGGAGGAACTTCAGTGGTTCGTGGTGGCTTTGGTGG  
CAGCCGTGCTGGTGGTAGATATGGTGGCAGTGGGGATGGCTCTAATGGATTGGTAATGATGGAAGCAATTTTGG  
AGGTGGTGGAAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAA  
TTTTGGAGGCAGAACTCTGGCCCTATGGCGGTGGAGGCCAGTACTTTGCAAAACCACGAAACCAAGGTGGCTA  
TGGCGGTTCCAGCAGCAGCAGTAGCTGTGTGAGTGGCAGAAGATTTTAATTAGGAAACAAAGCTTAGCAGGAGAG  
GAGAGCCAGAGAAGTGACAGGGAAGCCACAGGTTACAACAGATTTGTGAACCTCAGCCAAGCACAGTGGTGGCAGG  
GCCTAGCTGCTACAAAGAAGACATGTTTTAGACAAATACTCATGTGTATGGGCAAAAACTCGAGGACTGTGTTT  
GTGACTAATTGTATAACAGGTTATTTTAGTTTCTGTCTGTGGAAAGTGTAAGCATTCCAACAAAGCGTTTTAA  
TGTAATTTTTTTTTTTTGCACCCATGCTGTTGATTGCTAAATGTAATAGTCTGATCGTGACGCTGAATAAATGT  
CTTTTTTTTTTTAATGTGCTGTGTAAAGTTAGTCTACTCTGAAGCCATCTTGGTAAATTTCCCAACAGTGTGAA  
GTTAGAATTCCTTCAGGGTGATGCCAGGTTCTATTTGGAATTTATATACAACCTGCTTGGGTGGAGAAGCCATTG  
TCTTCGGAACCTTGGTGTAGTTGAACTGATAGTTACTGTTGTGACCTGAAGTTCACCATTAAGGGATTACCC  
AAACAAAGTCATGGAATGGTTATAAAAGTGATTGTTGGCACATCCTATGCAATATATCTAAATTGAATAATGGTA  
CCAGATAAAATTATAGATGGGAATGAAGCTTGTGTATCATCCATTATCATGTGTAATCAATAACAATTTAATTC  
TCTTGAA

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**FIGURE 5047**

MSKSESPKEPEQLRKLFIGGLSFETTDESLSRSHFEQWGTLTDCVVMRDPNTKRSRGFGFVITYATVEEVDAAMNAR  
PHKVDGRVVEPKRAVSREDSQRPDALHTVKKIFVGGIKEDTEHHLRDYFEQYCKIEVIEIMTDRGSGKKRGFAF  
VTFDDHDSVDKIVIQKYHTVNGHNCEVRKALSKQEMASASSSQRGRSGSGNFGGGRGGGFGGNDNFGRGGNFSGR  
GGFGGSRGGGGYGGSGDGYNGFGNDGSNFGGGGSYNDFGNYYN

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**FIGURE 5048**

AAGTCTCTCTTCACCCTGCCGTCATGTCTAAGTCAGAGTCTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCA  
TTGGAGGGTTGAGCTTTGAAACAACCTGATGAGAGCCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGA  
GTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAGGGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGG  
TGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGATGGAAGAGTTGTGGAACCAAGAGAGCTGTCTCCAGAG  
AAGATTCTCAAAGACCAGGTGCCCACTTAAGTGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAG  
AACATCACCTAAGAGATTATTTTGAACAGTATGGAAAAATTGAAGTGATTGAAATCATGACTGACCGAGGCAGTG  
GCAAGAAAAGGGGCTTTGCCTTTGTAACTTTGACGACCATGACTCCGTGGATAAGATTGTCATTTCAGAAATACC  
ATACTGTGAATGGCCACAACCTGTGAAGTTAGAAAAGCCCTGTCAAAGCAAGAGATGGCTAGTGCTTCATCCAGCC  
AAAGAGGTCGAAGTGTTCTGGAACTTTGGTGGTGGTTCGTGGAGGTGGTTTCGGTGGGAATGACAACTTCGGTC  
ATGGAGGAACTTCAGTGGTTCGTGGTGGCTTTGGTGGCAGCTCTAATGGATTGGTAATGATGGAAGCAATTTTG  
GAGGTGGTGAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAA  
ATTTTGGAGGCAGAACTCTGGCCCCTATGGCGGTGGAGGCCAGTACTTTGCAAAACCACGAAACCAAGGTGGC

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**FIGURE 5049**

ACCCTGCCGTCATGTCTAAGTCAGAGTCTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGA  
GCTTTGAAACAACCTGATGAGAGCCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGA  
GAGATCCAAACACCAAGCGCTCCAGGGGCTTTGGGTTTGTACATATGCCACTGTGGAGGAGGTGGATGCAGCTA  
TGAATGCAAGGCCACACAAGGTGGATGGAAGAGTTGTGGAACCAAAGAGAGCTGTCTCCAGAGAAGATTCTCAA  
GACCAGGTGCCCACTTAACTGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAA  
GAGATTATTTTGAACAGTATGGAAAAATTGAAGTGATTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGG  
GCTTTGCCTTTGTAACTTTGACGACCATGACTCCGTGGTGGCTTTGGTGGCAGCCGTGCTGGTGGTAGATATGG  
TGGCAGTGGGGATGGCTCTAATGGATTTGGTAATGATGGAAGCAATTTTGGAGGTGGTGGGAAGCTACAATGATTT  
TGGCAATTACAACAATCAGTCTTCAAATTTGGACCCATGAAGGG

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**FIGURE 5050**

TTTTCTTAGACATTAAGTGCAGACGGCTGGCAGGATAGAAGCAGCGGCTCACTTGGACTTTTTACCAGGGAAAT  
CAGAGACAATGATGGGGCTCTTCCCCAGAACTACAGGGGCTCTGGCCATCTTCGTGGTGGTCATATTGGTTTCATG  
GAGAATTGCGAATAGAGACTAAAGGTCAATATGATGAAGAAGAGATGACTATGCAACAAGCTAAAAAGAGGCAAA  
AACGTGAATGGGTGAAATTTGCCAAACCCTGCAGAGAAGGAGAAGATAACTCAAAAAGAAACCCAATTGCCAAGA  
TTACTTCAGATTACCAAGCAACCCAGAAAATCACCTACCGAATCTCTGGAGTGGGAATCGATCAGCCGCTTTTG  
GAATCTTTGTTGTTGACAAAAACACTGGAGATATTAACATAACAGCTATAGTCGACCGGGAGGAACTCCAAGCT  
TCCTGATCAGATGTCGGGCTCTAAATGCCCAAGGACTAGATGTAGAGAAACCCTTATACTAACGGTTAAATTT  
TGGATATTAATGATAATCCTCCAGTATTTTCAACAATAATTTTCATGGGTGAAATTGAAGAAAATAGTGCCTCAA  
ACTCACTGGTGATGATACTAAATGCCACAGATGCAGATGAACCAAAACCCTTGAATTCTAAAATTGCCTTCAAAA  
TTGTCTCTCAGGAACCAGCAGGCACCCATGTTCTCTAAGCAGAAACACTGGGGAAGTCCGTACTTTGACCA  
ATTCTCTTGACCGAGAGCAAGCTAGCAGCTATCGTCTGGTTGTGAGTGGTGCAGACAAAGATGGAGAAGGACTAT  
CAACTCAATGTGAATGTAATATTAAAGTGAAAGATGTCAACGATAACTTCCAATGTTTAGAGACTCTCAGTATT  
CAGCAGTATTGAAGAAAATATTTAAGTTCTGAATTACTTCGATTCAAGTAACAGATTGGATGAAGAGTACA  
CAGATAATTGGCTTGCAGTATATTTCTTACCTCTGGGAATGAAGGAAATTGGTTTGAAATACAACTGATCCTA  
GAACTAATGAAGGCATCCTGAAAGTGGTGAAGGCTCTAGATTATGAACAACTACAAAGCGTGAACTTAGTATTG  
CTGTCAAAAACAAAGCTGAATTTACCAATCAGTTATCTCTCGATACCGAGTTTCAGTCAACCCAGTCACAATTC  
AGGTAATAAATGTAAGAGAAGGAATTGCATTCCGTCTGCTTCCAAGACATTTACTGTGCAAAAAGGCATAAGTA  
GCAAAAATTTGGTGGATTATATCCTGGGAACATATCAAGCCATCGATGAGGACACTAACAAAGCTGCCTCAAATG  
TCAAATATGTCTGGGACGTAACGATGGTGGATACCTAATGATTGATTCAAAAAGCTGCTGAAATCAAATTTGTCA  
AAAAATGAACCGGAGATTCTACTTTTCATAGTTAAACAAAACAAATCACAGCTGAGGTTCTGGCCATAGATGAATACA  
CGGGTAAAACCTCTACAGGCACGGTATATGTTAGAGTACCCGATTTCAATGACAATTGTCCAACAGCTGTCTCTG  
AAAAAGATGCAGTTTGCAGTTCTTACCTTCCGTGGTTGTCTCCGCTAGAACACTGAATAATAGATACACTGGCC  
CCTATACATTTGCAGTGGAAAGATCAACCTGTAAAGTTGCCTGCCGTATGGAGTATCACAAACCTCAATGCTACCT  
CGGCCCTCCTCAGAGCCAGGAACAGATACCTCCTGGAGTATACCACATCTCCCTGGTACTTACAGACAGTCAGA  
ACAATCGGIGTGAGATGCCACGCAGCTTGACACTGGAAGTCTGTGAGTGTGACAACAGGGGCATCTGTGGAATT  
CTTACCCAACCACAAGCCCTGGGACCAGGTATGGCAGGCCGCACTCAGGGAGGCTGGGGCTGCCGCCATCGGCC  
TGCTGCTCCTTGGTCTCCTGCTGCTGCTGTTGGCCCCCTTCTGCTGTTGACCTGTGACTGTGGGGCAGGTTCTA  
CTGGGGGAGTGACAGGTGGTTTTATCCAGTTCTGTATGGCTCAGAAGGAACAATTCATCAGTGGGGAATTGAAG  
GAGCCCATCCTGAAGACAAGGAATCACAAATATTTGTGTGCTCCTGTAAACAGCCAATGGAGCCGATTTTCATGG  
AAAGTTCTGAAGTTTGTACAAATACGTATGCCAGAGGCACAGCGGTGGAAGGCACTTCAGGAATGGAAATGACCA  
CTAAGCTTGGAGCAGCCACTGAATCTGGAGGTGCTGCAGGCTTTGCAACAGGGACAGTGTGAGGAGCTGCTTCAG  
GATTCCGAGCAGCCACTGGAGTTGGCATCTGTTCTCAGGGCAGTCTGGAACCATGAGAACAAGGCATTCCACTG  
GAGGAACCAATAAGGACTACGCTGATGGGGCGATAAGCATGAATTTCTGGACTCCTACTTTTCTCAGAAAGCAT  
TTGCCGTGTGCGGAGGAAGACGATGGCCAGGAAGCAAATGACTGCTTGTGATCTATGATAATGAAGGCGCAGATG  
CCACTGGTTCTCCTGTGGGCTCCGTGGGTTGTGCAATTTTATGCTGATGACCTGGATGACAGCTTCTTGGACT  
CACTTGGACCCAAATTTAAAAAACTTGCAGAGATAAGCCTTGGTGTGATGGTGAAGGCAAAGAAGTTTCAGCCAC  
CCTCTAAAGACAGCGGTTATGGGATTGAATCCTGTGGCCATCCCATAGAAGTCCAGCAGACAGGATTTGTTAAGT  
GCCAGACTTTGTGAGGAAGTCAAGGAGCTTCTGCTTTGTCCGCTCTGGGTCTGTCCAGCCAGCTGTTTCCATCC  
CTGACCCCTCTGCAGCATGGTAATATTTAGTAACGGAGACTTACTCGGCTTCTGGTTCCCTCGTGCAACCTTCCA  
CTGCAGGCTTTGATCCACTTCTCACACAAAATGTGATAGTGACAGAAAGGTGATCTGTCCCATTTCAGTGTTC  
CTGGCAACCTAGCTGGCCCAACGCAGCTACGAGGGTCACATACTATGCTCTGTACAGAGGATCCTTGCTCCCGTC  
TAATATGACACAGAATGAGCTGGAATACCACACTGACCAATCTGGATCTTTGGACTAAAGTATTCAAAATAGCAT  
AGCAAAGCTCACTGTATTGGGCTAATAATTTGGCACTTATTAGCTTCTCTATAAACTGATCAGGATTATAAAT  
AAATGTTTGGGTTTCATACCCCAAAGCAATATGTGTCACTCCTAATCTCAAGTACTATTCAAATTGTAGTAA  
TCTTAAAGTTTTTCAAACCTAAAATCATATTCCG

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**FIGURE 5051**

MMGLFPRTTGALAIFVVVILVHGELRIETKGQYDEEEMTMQQAARRQKREWVKFAKPCREGEDNSKRNPIAKITS  
DYQATQKITYRISGVGIDQPPFGIFVVDKNTGDINITAIVDREETPSFLITCRALNAQGLDVEKPLILTVKILDI  
NDNPPVFSQQIFMGEIEENSASNSLVMILNATDADEPNHLNSKIAFKIVSQEPAGTPMFLLSRNTGEVRTLTNSL  
DREQASSYRLVVSGADKDGEGLSTQCECNIKVKVDVNDNPFMRDSQYSARIEENILSSELLRFQVTDLDEEYTDN  
WLAVYFFTSGNEGNWFEIQTDPRTNNEGILKVVKALDYEQLQSVKLSIAVKNKAEFHQSVISRYRVQSTPVTIQVI  
NVREGIAFRPASKTFTVQKGISSKKLVDYILGTYQAIDEDTNKAASNVKYVMGRNDGGYLMIDSKTAEIKFVKNM  
NRDSTFIVNKTITAEVLAIDEYTGKTSTGTVYVRVPDFDNCPTAVLEKDAVCSSSPSVVVSARTLNNRYTGPYT  
FALEDQPVKLPVWSITTLNATSALLRAQEIQPPGVYHISLVLTDSQNNRCEMPRSLTLEVCQCDNRGICGTSYP  
TTSPGTRYGRPHSGRLGPAAIGLLLLLGLLLLLLAPLLLLLTCDGAGSTGGVTGGFIPVPDGSEGTIHQWGIEGAH  
PEDKEITNICVPPVTANGADFMESEVCTNTYARGTAVEGTSGMEMTTKLGAATESGGAAGFATGTVSGAASGFG  
AATGVGICSSGQSGTMRTRHSTGGTNKDYADGAISMNFDLYFSQKAFACAEEDDGQEANDCLLIYDNEGADATG  
SPVGSVGCCSFIADDLDDSLDSLGPKFKKLAEISLGVDGEGKEVQPPSKDSGYGIESCGHPIEVQQTGFVKCQT  
LSGSQGASALSASGSVQPAVSIPDPLQHGNYLVTTETYSASGSLVQPSLAGFDPLLTQNVIVTERVICPISSVPGN  
LAGPTQLRGSHTMLCTEDPCSRLI

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**FIGURE 5052**

CCCACGCGTCCGGATGGTCTGCTGATCACAAAATATTAAAGAGACCGACCGCTAAGGGAACAGGAAAAACGTCCGAG  
ACAGCCGTTGCAATTACGAATGGACCAGACTTGGTAGCACGGGGCATTGATTGCTGGTGCCCCAACCGGACCCCTCC  
TCCCCTCTTCCCATCCCTTCCCCACCCAAAGCAGGCTCCCGCTGCGGCCGGGACCTCGCATCCCTGCAACGTGG  
CCGGGGCTGCATTTTTTCATGAGCCTAGGGTGAACAGGTGCGAAGTGCCTGGGAGCATCCGGCCAGCGGCCGAGC  
GCGGGGAACATGGAGAGCGAGCGCGACATGTACCGCCAGTTCCAGGACTGGTGCCTCAGGACTTACGGGGACTCA  
GGCAAGACCAAGACGGTGACCCGTAAAAAATACGAACGGATCGTCTAGCTCCTCAATGGCTCCGAGTCGAGCTCC  
ACGGACAACGCCAAATTTAAATTCTGGGTCAAATCGAAGGGCTTCCAGCTGGGCCAGCCGGACGAGGTCCGCGGG  
GGAGGCGCGGCCCAAGCAAGTGCTCTAGTGCTGTCAAGACCACGGATGGCGTAGGGGTAGATGAGAAGCTAT  
CTTTACGACGGGTAGCTGTGGTTGAAGATTTCTTTGACATTATTTATTGATGATGTGGAACGGGGCCAAATG  
GAGAACAAATTCGGAAACACGCTGGACAAAAGAGAACTTACAAAGCAATTTAGAGAGCTATGCCTTCTACCAA  
GAGAAGCGGTGACACGATTTCTAATGAGCTGCTCAGAGTGCCAGAAAAGAATGCATTTAAACCCAGATGGAACAG  
ATCATAAAGATAATGGAACCTCCCACTTTGGTGACCAGCATGATTGACTACAACATGCCAATTACCATGGCCT  
ACATGAAACACATGAAGCTGCAGCTGCTAACTCACAGCAAGATGAGGATGAAAGTTCAATAGAAAGTGATGAAT  
TTGACATGAGTGATTCAACACGGATGTGAGCTGTGAAGCTGTATCTTAGCTCCAATCTTGAAGAAAGAATGCAAA  
GTCCCCAGAAATCTTCATGGCCAGCAAGATGATGATTCTGCTGCAGAGAGCTTTAATGGCAATGAGACTCTGGGGC  
ACAGTTCAATTGCTTCAGGGGGAACACACAGCAGGGAGATGGGAGACTCCAACAGTGATGGCAAACTGGGCTGG  
AGCAAGATGAACAGCCACTGAACCTGAGTGACAGTCCCCTCTCTGCGCAGCTAACTTCGGAATACAGAAATAGATG  
ATCACAACAGTAATGGGAAAAACAAGTATAAGAATCTTCTAATTTCTGACCTCAAGATGGAACGAGAGGCGAGAG  
AAAATGGAAGCAAGTCTCCTGCACATAGTTACTCCAGCTATGACTCTGGCAAAATGAGAGTGATAGCCGAGGAG  
CTGAGGACCTCTCACTAAACAGGGGAGATGAGGACGAAGATGACCACGAGGACCATGACGATTCGGAGAAAGTTA  
ATGAGACAGACGGCGTTGAAGCCGAGCGGCTGAAAGCTTTAATATGTTTGTGAGGCTGTTGTAGATGAAAAC  
TGGACCGAATGGTCCCAATCTCTAAGCAGCCCAAAGAAAAGATCCAGGCTATCATTGACTCATGCAGGCGACAAT  
TCCCTGAGTATCAAGAGCGTGCCAGAAAACGTATACGTACTTACCTCAAGTCTGCGAGCGGATGAAAAGAAGTG  
GTTTTGAGATGTCTCGACCTATTCTTCCCACCTTACTTCAGCAGTTGCAGAGAGTATCTTGGCTTCAGCTTGTG  
AGAGTGAGAGTAGAAATGCCGCCAAGAGGATGCGTCTGGAGAGACAGCAGGATGAGTCTGCTCCAGCTGACAAAC  
AGTGTAACACAGAGGCGACCCAGGCCACTTACTCAACATCAGCTGTTCCAGGCTCACAGGACGTGCTGTACATCA  
ATGGAATGGGACCTATAGTTACCATAGTTACAGAGGGCTAGGAGGGGGTCTGCTAAATCTGAATGATGCTTCCA  
GCAGTGGAACCACTGATCTCAGCATGAAGAGACAATTGGCGACTAGCTCAGGATCCTCCAGCAGCTCAAACCTCA  
GACCCAGCTGAGTCCAATGAAATCAATGCCGTGAGACAGCTTGTGTCAGGATATCGAGAATCAGCTGCATTTT  
TATTGCGATCTGCAGATGAAGTGGAAAATCTCATTTTACAACAGAACTGAGACAGACGACCACCATATTCACTGA  
GGTCTAAATTTGCAGTTCCACTAATGACATTTTGAATTTCCAACAGAGATACTTCTGGTCTTACTGCACAGTCTT  
TTAAGAGAAATACTTCCATTATGCCACATTGTCCTTGATCCGTAAGTGATGTGTTAAGGTGCTTCAAAGGAATC  
TGACCTCTGAAGTACTTGAGCTACTTTAGTATGTCCAGCCTATTGCTTTTGTGTTTGTGTTGTCACCATAAATAT  
CAGGGGCATAAAAGGCTATCTATTCTTAATTCAGGATAAAACAGAAGAGCTTGTGGTATAAAACAATAGTTCA  
AGATCCAGCTGAAATATTAGTGGAATTTGCTACTGACTCATTGACTGAAAGCTGAAGTACCTGGCAAAAAA



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**FIGURE 5053**

MHVETGPNGEQIRKHAGQKRTYKAISESYAFLPREAVTRFLMSCSECQKRMHLNPDGTDHKDNGKPPTLVTSMD  
YNMFIITMAYMKHMKLQLLNSQQDEDESSIESDEFDMSDSTRMSAVNSDLSSNLEERMQSPQNLHGQQDDDSAAES  
FNGNETLGHSSIASGGTHSREMGSNSDGKTGLEQDEQPINLSDSPLSAQLTSEYRIDDHNSNGKNKYKNLLISD  
LKMEREARENGSKSPAHSYSSYDSGKNESVDRGAEDLSINRGDEDEDHEDHDDSEKVNETDGVAEERLKAFNMF  
VRLFVDENLDRMVPISKQPKEKIQAIIDSCRRQFPEYQERARKRIRTYLKSCRRMKRSGFEMSRPIPSHLTSAVA  
ESILASACESESRNAAKRMRLERQQDESAPADKQCKPEATQATYSTSAVPGSQDVLYINGNGTYSYHSYRGLGGG  
LLNLNDASSSGPTDLSMKROLATSSGSSSSSNSRPQLSPTEINAVRQLVAGYRESAAFLLSADELENLILQQN

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**FIGURE 5054**

ATCTTGCTGGTTTTCGGCCGGTCTTGATGAAGCGGCGGCCGTGGTGAGAGCGTGGGGAAGGGTGGGGTGAGGGG  
GCGAGGCCGAGCTAGGGCGGCGAACTCTCCTCCCCTCGGCCCCACCGCGTGGGACGGCGTGAACGTGGTGTCTG  
GAGGGATGTCAGCCTTCTCTGAGGCGGCGCTGGAGAAGAAGCTGTCGGAGTTGAGCAACTCGCAGCAGAGCGTGC  
AGACCTTGTCCCTGTGGCTCATTACACCACGTAAACACTCGCGTCCCATCGTCACCGTGTGGGAGCGGGAGCTGC  
GGAAAGCCAAACCAACAGGAAGCTTACTTTTCTCTACCTAGCCAATGATGTCATACAGAACAGCAAGAGGAAGG  
GGCCAGAGTTTACAAAAGATTTTGCACCAGTTATAGTGGAGGCTTTTAAGCATGTTTCAAGTGAACTGATGAAA  
GTTGTAAGAAGCACCTTGAAGAGTGTTATCTATTTGGGAAGAAAGGTCTGTTTATGAAAATGATGTATTAGAAC  
AACTTAAACAAGCTCTGTATGGTGATAAGAAGCCTAGGAAGCGAAGTTATGAACAGATAAAGGTGGATGAAAATG  
AAAAGTGTTCCTCTCTGGGATCTCCAAGTGAACCACCACAGACTCTAGATCTCGTTAGAGCATTACAAGATCTGG  
AAAATGCAGCCTCAGGTGATGCAGCAGTTTCATCAGAGGATAGCTTCTTTACCTGTTGAAGTCCAAGAAGTATCTC  
TATTAGATAAAATAACAGATAAAGAATCTGGAGAAAGGCTTTCCAAAATGGTAGAGGATGCGTGTATGTTGCTGG  
CAGATTACAATGGCAGATTTGGCGGCAGAAATAGATGATAGAAAGCAACTCACTCGAATGTTAGCAGATTTTCTTC  
GTTGTCAAAAGGAAGCCCTTGCAAGAGAAAGAGCATAAATTGGAAGAGTACAAGCGCAAGCTAGCCAGAGTTTCCC  
TGGTGCGCAAGAAGCTCAGGTCCCGGATCCAGAGCCTGCCAGACTTATCTCGATTGCCCAATGTCTAGTGGCAGCC  
ACATGCACCTGCCCTTTGCGGGAGACATCTACAGTGAAGATTGATGGACCAGCCTCTTCCAGGTCCCAGGACTT  
TGCAAGAGATGGAGACAGGTTAGGTGGATAGTCTGTAGTGTATTTTGTATATTGTTGAGAAAGAAACACTAA  
CAAAAGGAACAACGAGTAATTTATAAAATTGTTTAAATGTTGGTTGTTTACTATTTTATTGGTAAATTAACAT  
GACTTAATTTGAACAAAGTGATGATTTGTGTGTATTAATAAGCTCACAAATAGTGATTATTTTCAAAAGATCTTT  
TTGTAAATTTTTTTTTTGTATCCAGGCCTTGTGAGAAATCTCTGTTTGTATTTCTTCAGGTATTTTCAATGTG  
TTTCTTTATTTTCTTCAGCAITTAATCACTGTATACTATGTAATTCCTGAAGGGGAAGAACTAATTAGGAGTTGA  
TTGAGACTTTTATTATGGTATAGTTAGGACTTGATTGTAGAAGGGACTAAATGTTCCAACATAATCTTTACCCTTC  
TCCCCAAACAAAATATCAATTCGTGTCTCTACATGCCCTTTGATTCCCTTAGAGGTCCGTAATTTAACATAAAACA  
GGGATGTCACCTTTGAGGGGCAGATGAAAGTCTAGAGAAGTGTTCCTTAATAGCATTGTAAAAGTTCATTCCAAC  
TGCCAGTGTAGATTTTAAAGTGTTAAATAGTGAAGTCCCTTGATTAAAGTGTGTAATTATTTGAGTAGATTAA  
TAATGAAAATACCTTTGGAATAATATACATTTTGACATTCTACCAAGAGGACAAGTTGGTCTGGAAGTGGTTT  
CTATTTGTCAAATCAGTTTCTTTTAAACATAATTAATCCCTTTAAACAAAAGCCGTCTATGGGATTTAAAGACAC  
GTGAAATGATACTTTTATTATTCCTTGCTCATATAACTTTAAAAATAATACTTTTAGCTCTAATAGCTCAAGAA  
CACAAATATTCGTTAATGTTTCAGTAAAGTAGCCTGAGACATTTTCAATGTTTCTTAAGGTTTTTGAATGACTGTA  
TATTTGGCAGTTAAGCAGTGCCACACTACAGGGTAGATATGGTAAATTTTATATTTGTATTTACAGTTACAAA  
ACAAATGTACTTTTACCTTTTATTTCTGACCCTGTGTGTAGAGCAGTTGCATGCTCTCTGCTGTTAAAAACAC  
ATTGTTAAGCTGTGGATTGTACTCAATAATGACTTAGGATAAACATTTATTTTATTTCATTGCTTTACATACTA  
GACATTTTCTCTCTTGTAGTAGATTCAAATTAGATAGTCAATAAAACATCTTGAAAATCCCACAAGCC

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**FIGURE 5055**

ACCGCGTGTTCGCGCCTGGTAGAGATTTCTCGAAGACACCAGTGGGCCCCGTTCCGAGCCCTCTGGACCGCCCGTG  
TGGAACCAAACCTGCGCGCGTGGCCGGGCGGTGGGACAACGAGGCCGCGGAGACGAAGGCGCAATGGCGAGGAAG  
TTATCTGTAATCTTGATCCTGACCTTTGCCCTCTCTGTACAAAATCCCCTTCATGAACATAAAGCAGCTGCTTTC  
CCCCAGACCACTGAGAAAATTAGTCCGAATTGGGAATCTGGCATTAAATGTTGACTTGGCAATTTCCACACGGCAA  
TATCATCTACAACAGCTTTTCTACCGCTATGGAGAAAATAATTCTTTGTCAAGTTGAAGGGTTCAGAAAATTACTT  
CAAAATATAGGCATAGATAAGATTAAAAGAATCCATATACACCATGACCACGACCATCACTCAGACCACGAGCAT  
CACTCAGACCATGAGCGTCACTCAGACCATGAGCATCACTCAGAGCAGGAGCATCACTCTGACCATGATCATCAC  
TCTCACCATAATCATGTCTTCTGGTAAAAATAAGCGAAAAGCTCTTTGCCAGACCATGACTCAGATAGTTCA  
GGTAAAGATCCTAGAAACAGCCAGGGGAAAGGAGCTCACCGACCAGAACATGCCAGTGGTAGAAGGAATGTCAAG  
GACAGTGTGTAGTGTAGTGAAGTGACCTCAACTGTGTACAACACTGTCTCTGAAGGAACACTTTTCTAGAGACA  
ATAGAGACTCCAAGACCTGGAAAACCTCTTCCCCAAAGATGTAAGCAGCTCCACTCCACCCAGTGTACATCAAAG  
AGCCGGGTGAGCCGGCTGGCTGGTAGGAAAACAAATGAATCTGTGAGTGAAGCCCCGAAAAGGCTTTATGTATTCC  
AGAAACACAAATGAAAATCCTCAGGAGTGTTCATATGCATCAAAGCTACTGACATCTCATGGCATGGGCATCCAG  
GTTCCGCTGAATGCAACAGAGTTCAACTATCTCTGTCCAGCCATCATCAACCAAATTGATGCTAGATCTGTCTGT  
ATTATACAAGTGAAGAAAGGCTGAAATCCCTCCAAAGACCTATTCAATACAAATAGCCTGGGTTGGTGGTTTT  
ATAGCCATTTCCATCATCAGTTTCTGTCTCTGCTGGGGTTATCTTAGTGCCTCTCATGAATCGGGTGTTTTTTC  
AAATTTCTCCTGAGTTTCTTGTGGCACTGGCCGTGGGACTTTGAGTGGTGATGCTTTTTTACACCTTCTTCCA  
CATTCTCATGCAAGTCACCACCATAGTCATAGCCATGAAGAACCAGCAATGGAAATGAAAAGAGGACCACTTTTC  
AGTCATCTGTCTTCTCAAAACATAGAAGAAAGTGCTATTTTGAATCCACGTGGAAGGGTCTAACAGCTCTAGGA  
GGCCTGTATTTTATGTTTTCTTGTGAACATGTCTCACATTGATCAAACAATTTAAAGATAAGAAGAAAAGAAT  
CAGAAGAAACCTGAAAATGATGATGATGTGGAGATTAAGAAGCAGTTGTCCAAGTATGAATCTCAACTTTCAACA  
AATGAGGAGAAAGTAGATACAGATGATCGAAGTGAAGGCTATTTACGAGCAGACTCACAAGAGCCCTCCCACTTT  
GATTCTCAGCAGCCTGCAGTCTTGGAAAGAAGAGGTCATGATAGCTCATGCTCATCCACAGGAAGTCTACAAT  
GAATATGTACCCAGAGGGTGCAAGAATAAATGCCATTACATTTCCACGATACACTCGGCCAGTCAGACGATCTC  
ATTCAACCACCATCATGACTACCATCATATTCTCCATCATCACCACCACCAAAACCACCATCCTCAGATCAGAGC  
CAGCGCTACTCTCGGAGGAGCTGAAAGATGCCGGCTCGCCACTCTGGCCTGGATGGTGATAATGGGTGATGGC  
CTGCACAATTTACGCGATGGCCTAGCAATTGGTGCTGCTTTTACTGAAGGCTTATCAAGTGGTTTAAGTACTTCT  
GTTGCTGTGTTCTGTCTAGTGTGCTCATGAATTAGGTGACTTTGCTGTCTACTAAAGGCTGGCATGACCGTT  
AAGCAGGCTGTCTTTATAATGCATTGTGAGCCATGTGGCGTATCTTGAATGGCAACAGGAATTTTCATTGGT  
CATTATGCTGAAAATGTTTCTATGTGGATATTTGCACCTACTGCTGGCTTATTCATGTATGTTGCTCTGGTTGAT  
ATGGTACCTGAAATGCTGCACAATGATGCTAGTGACCATGGATGTAGCCGCTGGGGGTATTTCTTTTTACAGAA  
GCTGGGATGCTTTTGGGTTTTGGAATTATGTTACTTATTTCCATATTTGAACATAAAATCGTGTTCGTATAAAT  
TTCTAGTTAAGGTTTTAAATGCTAGAGTAGCTTAAAAAGTTGTCATAGTTTCAGTAGGTATAGGGAGATGAGTTT  
GTATGCTGTACTATGCAGCGTTTTAAAGTTAGTGGTTTTGTGATTTTTGTATTGAATATTGCTGTCTGTTACAAA  
GTCAGTTAAAGGTACGTTTTAATATTTAAGTTATTCTATCTGGAGATAAAATCTGTATGTGCAATTCACCGGTA  
TTACCAGTTTATTATGTAAACAAGAGATTGGCATGACATGTTCTGTATGTTTCAGGGAAAAATGTCTTTAATGC  
TTTTTCAAGAACTAACACAGTTATTCTTATCTGATTTTAGGTCTCTGAAGAACTGCTGGTG

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**FIGURE 5056**

AGTTGGCGACATGGTGGCACCCTGCTGGAGACTTCTCACGTGTTTTGCTGCCCCAAACCGGGTGCGGGGAGTCTT  
GAACTGGAGCTCTGGGCCCAGAGGACTTCTGGCCTTTGGCACGTCTGCTCCGTGGTGCTCTATGACCCCTGAA  
AAGGGTTGTTGTTACCAACTTGAATGGTCACACCGCCGAGTCAATTGCATACAGTGGATTTGTAAACAGGATGG  
CTCCCTTCTACTGAATTAGTTTCTGGAGGATCTGATAATCAAGTGATTCACTGGGAAATAGAGGATAATCAGCT  
TTTAAAGCAGTGCATCTTCAAGGCCATGAAGGACCTGTTTATGCGGTGCATGCTGTTTACCAGAGGAGGACATC  
AGATCCTGCATTATGTACACTGATCGTTTCTGCAGCTGCAGATTCTGCTGTTGACTCTGGTCTAAAAAGGGTCC  
AGAAGTAATGTGCCTTCAGACTTTAAACTTTGGAAATGGATTTGCTTTGGCTCTCTGCTTATCTTTTTTGCCAA  
TACTGATGTACCAATATTAGCATGTGGCAATGATGATTGCAGAATTCACATATTTGCTCAACAAAATGATCAGTT  
TCAGAAAGTGCTTTCTCTCTGTGGACATGAGGATTGGATTAGAGGAGTGAATGGGCAGCCTTTGGTAGAGATCT  
TTTCTAGCAAGCTGTTTACAAGATTGCCTGATAAGAATATGGAAGCTGTATATAAAGTCAACATCTTTAGAAAC  
TCAGGATGACGATAACATAAGACTGAAAGAAAATACTTTTACCATAGAAAATGAAAGTGTTAAATAGCATTGTC  
TGTTACTCTGGAGACAGTGCTAGCCGGTCATGAAAACCTGGGTAAATGCAGTTCAGTGGCAACCTGTGTTTTACAA  
AGATGGTGCTTACAGCAGCCAGTGAGATTATTATCTGCTTCCATGGATAAAACCATGATTCTCTGGGCTCCAGA  
TGAAGAGTCAGGAGTTTGGCTAGAACAGGTTTCAGTAGGTGAAGTAGGTGGGAATACTTTGGGATTTTATGATTG  
CCAGTTCAATGAAGATGGCTCCATGATCATTGCTCATGCTTTCCACGGAGCGTTGCACCTTTGGAAACAGAATAC  
AGTTAACCCAAGAGAGTGGACTCCAGAGATTGTCATTTCAGGACACTTTGATGGTGTTCCAGACCTAGTCTGGGA  
TCCAGAAGGAGAAATTTATTACTGTTGGTACTGATCAGACAACCTAGACTTTTTGCTCCATGGAAGAGAAAAGA  
CCAATCACAGGTGACTTGGCATGAAATTGCAAGGCCCTCAGATACATGGGTATGACCTGAAATGTTTGGCAATGAT  
TAATCGGTTTTAGTTTGTATCTGGAGCAGATGAAAAAGTTCTTCGGGTTTTTTCTGCACCTCGGAATTTTGTGGA  
AAATTTTTGTGCCATTACAGGACAATCACTGAATCATGTGCTCTGTAATCAAGATAGTGATCTTCCAGAAGGAGC  
CACTGTCCCTGCATTGGGATTATCAATAAAGCTGTCTTTCAGGGAGATATAGCTTCTCAGCCTTCTGATGAAGA  
GGAGCTGTTAACTAGTACTGGTTTTGAGTATCAGCAGGTGGCCTTTCAGCCCTCCATACTTACTGAGCCTCCAC  
TGAGGATCATCTTCTGCAGAATACTTTGTGGCCTGAAGTTCAAAAACCTATATGGGCACGGTTATGAAATATTTG  
TGTTACTTGTAAACAGTTCAAAGACTCTGCTTGCCTCAGCTTGTAAGGCAGCTAAGAAAGAGCATGCAGCTATCAT  
TCTTTGGAACACTACATCTTGAAACAGGTGCAGAATTTAGTTTTCCACAGTTTGACAGTCACGCAGATGGCCTT  
CTCACCTAATGAGAAGTTCTTACTAGCTGTTTCCAGAGATCGAACCTGGTCATTGTGGAAAAAGCAGGATACAA  
CTCACCTGAGTTCGAGCCAGTTTTTAGTCTTTTTGCCTTACCAACAAAATTACTTCTGTGCACAGTAGAATTAT  
TTGGTCTTGTGATTGGAGTCTTGACAGCAAGTATTTCTTCACTGGGAGTCGAGACAAAAGGTGGTGTCTGGGG  
TGAGTGGGACTCCACTGATGACTGTATTGAGCACAACATTGGCCCCCTGCTCCTCAGTCTGGACGTGGGTGGGGC  
TGTGACAGCTGTGACGCTCTGCCCAGTGTCCACCCTTCTCAACGATACGTGGTTGCAGTAGGATTGGAGTGTGG  
AAAGATTTGCTTATATACCTGGAAAAAGACTGATCAAGTTCAGAAATAAATGACTGGACCCACTGTGTAGAAAC  
AAGTCAAAGCCAAAGTCATACACTGGCTATCAGAAAATTATGCTGGAAGAATTGCAGTGGAAAAACTGAACAGAA  
GGAAGCAGAAGGTGCTGAGTGGTTACACTTTGCAAGCTGTGGTGAAGATCACACTGTGAAGATACACAGAGTCAA  
TAAATGTGCACTGTAATGG

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**FIGURE 5057**

MVAPVLETSHVFCCPNRVRGVLNWSSGPRGLLAFGTSCSVVLYDPLKRVVVTNLNGHTARVNCIQWICKQDGSPS  
TELVSGGSDNQVIHWEIEDNQLLKAVHLQGHEGPVYAVHAVYQRRITSDPALCTLIVSAAADSAVRLWSKKGPEVM  
CLQTLNFGNGFALALCLSFLPNTDVPILACGNDDCRIHIFAQQNDQFQKVLSLCGHEDWIRGVEWAAFGRLFLA  
SCSQDCLIRIWKLYIKSTSLETQDDDNIRLKENTFTIENESVKIAFAVILETVLAGHENWVNAVHWQPVFYKGV  
LQQPVRLLSASMDKTMILWAPDEESGVWLEQVRVGEVGGNTLGFYDCQFNEDGSMIIAHAFHGALHLWKQNTVNP  
REWTPEIVISGHFDGVQDLVWDPEGEFIITVGTDQTTRLFAPWKRKQSQVTWHEIARPQIHGYDLKCLAMINRF  
QFVSGADEKVLRVFSAPRNFVENFCAITGQSLNHVLCNQSDLPAGATVPALGLSNKAVFQGDIA SQPSDEEELL  
TSTGFEYQQVAFQPSILTEPPTEDHLLQNTLWPEVQKLYGHGYEIFCVTCNSSKTLASACKAAKKEHAAIILWN  
TTSWKQVQNLVFHSLTVTQMAFSPNEKFLAVSRDRTWSLWKKQDTISPEFEPVFSLFAFTNKITSVHSRIIWSC  
DWSPDSKYFFTGSRDKKVVVWGECDSTDDCIEHNIGPCSSVLDVGGAVTAVSVCPVLHPSQRYVVAVGLECGKIC  
LYTWKKTQVPEINDWTHCVETSQSQSHTLAIRKLCWKNCSGKTEQKEAEGAEWLHFASCGEDHTVKIHRVNKCA  
L

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**FIGURE 5058**

CTCTCCTCCCGCCGCCCAAGATGCCGAAAGGAAAGAAGGCCAAGGGAAAGAAGGTGGCTCCGGCCCCCTGCTGTCTG  
TGAAGAAGCAGGAGGCTAAGAAAGTGGTGAATCCCCTGCTTGAGAAAAGGCCTAAGAATTTTGGCATTGGACAGG  
ACATCCAGCCCAAAAGAGACCTCACCCGCTTTGTGAAATGGCCCCGCTATATCAGGTTGCAGCGGCAGAGAGCCA  
TCCTCTATAAGCGGCTGAAAGTGCCTCCTGCGATTAACCAAGTTACCCAGGCCCTGGACCGCCAAACAGCTACTC  
AGCTGCTTAAGCTGGCCCAAAATACAGACCAGAGACAAAGCAAGAGAAGAAGCAGAGACTGCTGGCCCGGGAGG  
AGAAGAAAGCTGCTGGCAAAGGGGACGTCCCCACGAAAAGACCACCTGTCCTTCGAGCAGGAGTTAATACCGTCA  
CCACCTTGGTGGAGAACAAGAAAGCTCAGCTGGTGGTAATTGCACATGACGTGGATCCCATCGAGCTGGTTGTCT  
TCTTGGCTGCCCTGTGTCTGTAATAATGGGGGTCCCTTACTGCATTATCAAGGGGAAGGCAAGACTGGGACGTCTAG  
TCCACAGGAAGACCTGCACCCTGTCGCCTTCACACAGGTGAACTCGGAAGACAAAGGCACTTTGGCTAAGCTGA  
TGGAAGCTATCAGGACCAATTACAATGACAGATACGATGAGATCCGCCGTCACTGGGGCGGCAACGTCTGGGTC  
CTAAGTCTGTGGCTCGTATCGCCAAGCTCGAAAAGGCAAAGGCTAAAGACCTTGCCACTAAACTGGGTAAATGT  
ACACTGTTGAGTTTCTGTACATAAAAATAATTAAAATAATACAAATTTCTTC

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**FIGURE 5059**

MPKGKKAKGKKVAPAPAVVKKQEAKKVVNPLLEKRPKNFGIGQDIQPKRDLTRFVKWPRYIRLQRQRAILYKRLK  
VPPAINQFTQALDRQTATQLLKLAHKYRPETKQEKQRLAREEKKAAGKGDVPTKRPPVLRAGVNTVTTLVENK  
KAQLVVIAHDVDPIELVVFLAALCRKMGVPYCIKKGARLGRVHRKTCTTVAFTQVNSEDKGTLAKLMEAIRTN  
YNDRYDEIRRHWGGENVLGPKSVARIAKLEKAKAKDLATKLG

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**FIGURE 5060**

GGCACGAGGGCGGGGCGCATCTCCGCTAGGAGTTCTAGTAAAGTGGCGGGAGCCGCAGCTATGAGCCGCAGG  
AGGAGAGAGAAACGCAGGTTGCTGCGTGGTTAAAAAAATATTTGGAGATCATCCTATTCCACAGTATGAGGTGA  
ACCCACGGACCACAGAGATTTTACATCACCTTTCAGAACGCAACAGGGTCCGGGACAGGGATGTCTACCTGGTAA  
TAGAGGACTTGAAGCAGAAAGCAAGTGAATACGAGTTCAGAAGCCAAGTATCTTCAAGACCTTCTCATGGAGAGTG  
TGAATTTTCCCCCGCCAATCTCTCTAGCACTGGTTCCAGGTATCTGAATGCTTTGGTTGACAGTGCAGGTGGCCC  
TTGAAACAAAGGATACCTCGCTAGCTAGTTTTATCCCTGCAGTGAATGATTTGACCTCTGATCTCTTTCGTACCA  
AATCCAAAAGTGAAGAAATCAAGATTGAACTGGAAAACTTGAAAAAAATTTAACTGCAACTTTAGTATTAGAAA  
AATGTCTACAAGAGGATGTCAAGAAAGCAGAGTTGCATCTGTCTACAGAAAGGGCCAAAGTTGATAATCGTCGTC  
AGAACATGGACTTTCTAAAAGCAAAGTCAGAGGAATTCAGATTTGGAATCAAGGCTGCAGAGGAGCAACTTTCAG  
CCAGAGGCATGGATGCTTCTCTGTCTCATCAGTCCTTAGTAGCACTATCAGAGAACTGGCAAGATTAAAGCAAC  
AGACTATACCTTTGAAGAAAAAATTTGGAGTCCTATTTAGACTTAATGCCGAATCCGTCTCTTGCTCAAGTGAAAA  
TTGAAGAAGCAAAGCGAGAAGTATAGCATTGAAGCTGAACTTACAAGAAGAGTAGACATGATGGAAGCTGAGC  
AAAAGCCAAATAAACATCCTTTTCCCTAACAAAGTAAATTGAATAGGACTTTACAGAGTTCTTTTCCCTCTTGGC  
ATTTCCCTAATAACAAAACCTTTCTGTGTTCTTAGATTACAGAATATCATAATTGATAGAATATGGTTTCTTACTGT  
GTGTTGCATTTTGTGCCCAAATACATAGTTTTCATATTAAAAAGCCTTTTCTCTTAAAAAAAAAAAAAAAAAAAA  
AA



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**FIGURE 5061**

MEPQEERETQVAAWLKKIFGDHPIPQYEVNPRTEILHHLSENRVRDRDVYLVIEDLKQKASEYESEAKYLQDL  
LMESVNFSPANLSSTGSRYLNALVDSVALETKDTSASFIPAVNDLTSDLFRTKSKSEEIKIELEKLEKNLTAT  
LVLEKCLQEDVKKAEHLHLSTERAKVDNRRQNMDFLKAKSEEFRTGKAAEEQLSARGMDASLSHQSLVASEKLA  
RLKQQTIPLKKKLESYLDLMPNPSLAQVKIEEAKRELDSEAELTRRVDMMEL

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**FIGURE 5062**

GTCCCAGTCAGTCCGGAGGCTGCGGCTGCAGAAGTACCGCCTGCGGAGTAAGTGC~~AAAGATG~~CTGTCCGTGCGCG  
TTGCTGCGGCCGTGGTCCGCGCCCTTCCTCGCGGGCCGGACTGGTCTCCAGAAATGCTTTGGGTTTCATCTTTCA  
TTGCTGCAAGGAACCTCCATGCCTCTAACACTCATCTTCAAAGACTGGGACTGCTGAGATGTCTCTATTCTTG  
AAGAGCGTATTCTTGGAGCTGATACCTCTGTTGATCTTGAAGAACTGGGCGTGTCTTAAGTATTGGTGATGGTA  
TTGCCCCGCTACATGGGCTGAGGAATGTTCAAGCAGAAGAAATGGTAGAGTTTCTTCAGGCTTAAAGGGTATGT  
CCTTGAACCTGGAACCTGACAATGTTGGTGTGTGTCGTTTGGAAATGATAAACTAATTAAGGAAGGAGATATAG  
TGAAGAGGACAGGAGCCATTGTGGACGTTCCAGTTGGTGAGGAGCTGTTGGGTCGTGTAGTTGATGCCCTTGGTA  
ATGCTATTGATGGAAGGGTCCAATTGGTTCCAAGACGCGTAGCGGAGTTGGTCTGAAAGCCCCCGGTATCATT  
CTCGAATTTAGTGCGGGAACCAATGCAGACTGGCATTAAAGGCTGTGGATAGCTTGGTGCCAATTGGTCGTGGT  
AGCGTGAAGTATTATTGGTGACCGACAGACTGGGAAAACCTCAATTGCTATTGACACAATCATTAAACCAGAAAC  
GTTTCAATGATGGATCTGATGAAAAGAAGAAGCTGTACTGTATTTATGTTGCTATTGGTCAAAAGAGATCCACTG  
TTGCCCAGTTGGTGAAGAGACTTACAGATGCAGATGCCATGAAGTACACCATTGTGGTGTGCGGTACGGCCTCGG  
ATGCTGCCCCACTTCAGTACCTGGCTCCTTACTCTGGCTGTTCCATGGGAGAGTATTTTAGAGACAATGGCAAAC  
ATGCTTTGATCATCTATGACGACTTATCCAAACAGGCTGTTTGCTTACCGTCAGATGTCTCTGTTGCTCCGCCGAC  
CCCCTGCTCGTGAGGCCTATCCTGGTGATGTGTTCTACCTACACTCCCGGTTGCTGGAGAGAGCAGCCAAAATGA  
ACGATGCTTTTGGTGGTGGCTCCTTGACTGCTTTGCCAGTCATAGAAACACAGGCTGGTGATGTGTCTGCTTACA  
TTCCAACAAATGTCAATTTCCATCACTGACGGACAGATCTTCTTGAAACAGAATTGTTCTACAAAGGTATCCGCC  
CTGCAATTAACGTTGGTCTGTCTGTATCTCGTGTGCGGATCCGCTGCCCAAACCAGGGCTATGAAGCAGGTAGCAG  
GTACCATGAAGCTGGAATTGGCTCAGTATCGTGAGGTTGCTGCTTTTGCCAGTTCGGTTCTGACCTCGATGCTG  
CCACTCAACAACTTTTGAAGTCGTGGCGTGCGTCTAACTGAGTTGCTGAAGCAAGGACAGTATTCTCCCATGGCTA  
TTGAAGAACAAGTGGCTGTTATCTATGCGGGTGTAAGGGGATATCTTGATAAACTGGAGCCCAGCAAGATTACAA  
AGTTTGAGAATGCTTTCTTGTCTCATGTGTCAGCCAGCACCAAGCCTTGTTGGGCACTATCAGGGCTGATGGAA  
AGATCTCAGAAATCAGATGCAAAGCTGAAAGAGATTGTAACAAATTTCTTGGCTGGATTTGAAGCT~~TAA~~ACTC  
CTGTGGATTACATCAAATACCAGTTCAGTTTTGTCATTGTTCTAGTAAATTAGTTCCATTTGTAAAGGGTTAC  
TCTCATACTCCTTATGTACAGAAATCACATGAAAAATAAGGTTCCATAATGC

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**FIGURE 5063**

MLSVRVAAAVRALPRRAGLVSRNALGSSFIAARNFHASNTHLQKTGTAE MSSILEERILGADTSVDLEETGRVL  
SIGDGIARVHGLRNVQAEEMVEFSSGLKGMSLNLEPDNVGVVVF GNDKLIKEGDIVKRTGAIVDVPVGEELLGRV  
VDALGNAIDGKGPIGSKTRRRVGLKAPGIIPRISVREPMQTGIKAVDSLVP IGRGQRELIIGDRQTGKTSIAIDT  
IINQKRFNDGSDEKKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATASDAAPLQYLAPYSGCSMGEYF  
RDNGKHALIIYDDLKQAVAYRQMSLLLRPPGREAYPGDV FYLHSRLLERAAKMNDAGGGSLTALPVIETQAG  
DVSAYIPTNVISITDGQIFLETIFYKGIRPAINVGLSVSRVGSAAQTRAMKQVAGTMKLELAQYREVA AFAQFG  
SDLDAATQQLLSRGVRLTELLKQGQYSPMAIEEQVAVIYAGVRGYLDKLEPSKITKFENAF LSHVVSQHQALLGT  
IRADGKISEQSDAKLKEIVTNFLAGFEA

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**FIGURE 5064**

CCATGGACTTTATCAACGACGCCACCGACGTCAACGATGCCCTGGGCTATGTGACCCGCTTCTACCGCGAGGCCT  
CGTCCGGCGCTGCCAAGAAGAGGCTGCTGCTCTTCTCAGATGGCAACTCGCAGGGCGCCACGCCCCGCTGCCATCG  
AGAAGGCCGTGCAGGAAGCCCAGCGGGCAGGCATCGAGATCTTCGTGGTGGTCGTGGGCGCCAGGTGAATGAGC  
CCCACATCCGCGTCCTGGTCACCGGCAAGACGGCCGAGTACGACGTGGCCTACGGCGAGAGCCACCTGTTCCGTG  
TCCCCAGCTACCAGGCCCTGCTCCGCGGTGTCTTCCACCAGACAGTCTCCAGGAAGGTGGCGCTGGGCTAGCCCA  
CCCTGCACGCCGGCACCAAACCCTGTCCTCCCACCCCTCCCCACTCATCACTAAACAGAGTAAAATGTGATGCGA  
ATTTTCCCGACCAACCTGATTCGCTAGATTTTTTTCCTTCTGTGTTTTTTTCTGAACCATATCCATGTTGCTGAC  
TTTTCAAATAAAGGTTTTCACTCCTC

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**FIGURE 5065**

CTCAGCCCCAGCTCCAACAGAAGCAGCCCCGGCCACCCACTCCCCGTGACCGCCACGCCACATGGACACAGCCCT  
CGCCCTCCGCCCCGGCTTTTCTCTGCCTTTCTACCGACCATGTGACCCCGCACCAGCCCTGCCCCACCTGCCCT  
CCCCGGCAGTACTGGGGACCTTCCCTGGGGGACGGGGAGGGAGGAGGCAGCGACTCCTTGGACAGAGGCCTGGGC  
CCTCAGTGGACTGCCTGCTCCACAGCCTGGGCTGACGTCAGAGGCCGAGGCCAGGAAGTGAAGTGGGCCCCCTGG  
TCCTGGGTCTCAGGATGGGTCTGGGGGCTCGTGTTCATCAAGACACCCCTCTGCCCAGCTCACCACATCTTCA  
TCACCAGCAAACGCCAGGACTTGGCTCCCCATCCTCAGAACTCACAAGCCATTGCTCCCCAGCTGGGGAACCTC  
AACCTCCCCCCTGCCTCGGTTGGTGACAGAGGGGGTGGGACAGGGGCGGGGGGTCCCCCTGTACATACCCTGCC  
ATACCAACCCAGGTATTAATTCTCGCTGGTTTTGTTTTTATTTTAATTTTTTGTGTTTTGATTTTTTTAATAAGA  
ATTTTCATTTTAAGCACATTTATACTGAAGGAATTTGTGCTGTGTATTGGGGGGAGCTGGATCCAGAGCTGGAGG  
GGGTGGGTCCGGGGGAGGGAGTGGCTCGGAAGGGGCCCCCACTCTCCTTTCATGTCCCTGTGCCCCCAGTTCTC  
CTCCTCAGCCTTTTCTCCTCAGTTTTCTCTTAAACCTGGAAGTACTAAGTTTCCAAGGCCTGCCTTCCCCTC  
CCTCCCACTGGAGAAGCCGCCAGCCCTTTCTCCTCTGCCTGACCACTGGGTGTGGACGGTGTGGGGCAGCCCT  
GAAAGGACAGGCTCCTGGCCTTGGCACTTGCTGCACCCACCATGAGGCATGGAGCAGGGCATAGCAAGGGCCCC  
GGGACAGAGTTTTCCCAGACCTGGCTCCTCGGCAGAGCTGCCTCCCGTCAGGGCCCACATCATCTAGGCTCCCCA  
GCCCCCACTGTGAAGGGGCTGGCCAGGGGCCCCGAGCTGCCCCCAACCCCGGCCTCAGCCACCAGCACCCCCATAG  
GGCCCCCAGACACCACACACATGCGCGTGCGCACACACAAACACACACACTGGACAGTAGATGGGCCGACA  
CACACTTGGCCCAGTTCTCCATTTCCCTGGCXTGGCCCCCAACCCCAACCTGTCCACCCCCGTGCCCCCTC  
CTTACCCCGCAGGACGGGCCTACAGGGGG

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**FIGURE 5066**

AGGTTTCGATACAAGAGGCTGTTTTCTAGCGTGGCTTGCTGCCTTTGGTAAAGAACATGTCGTCCATCTTGCCATT  
CACGCCGCCAGTTGTGAAGAGACTGCTGGGATGGAAGAAGTCAGCTGGTGGGTCTGGAGGAGCAGGCGGAGGAGA  
GCAGAAATGGGCAGGAAGAAAAGTGGTGTGAGAAAGCAGTGAAAAGTCTGGTGAAGAAGCTAAAGAAAACAGGACG  
ATTAGATGAGCTTGAGAAAGCCATCACCCTCAAACTGTAATACTAAATGTGTTACCATAACCAAGCACTTGCTC  
TGAAATTTGGGGACTGAGTACACCAATACGATAGATCAGTGGGATACAACAGGCCTTTACAGCTTCTCTGAACA  
AACCAGGTCTCTTGATGGTCTCTCCAGGTATCCCATCGAAAAGGATTGCCACATGTTATATATTGCCGATTATG  
GCGCTGGCCTGATCTTCACAGTCATCATGAAGTCAAGGCAATTGAAAAGTGCGAATATGCTTTTAATCTTAAAA  
GGATGAAGTATGTGTAAACCCCTTACCCTATCAGAGAGTTGAGACACCAGTTTTGCCTCCAGTATTAGTGCCCCG  
ACACACCGAGATCCTAACAGAACTTCCGCCTCTGGATGACTATACTACTCCATTCCAGAAAACACTAACTTCCC  
AGCAGGAATTGAGCCACAGAGTAATTATATTCCAGAAACGCCACCTCCTGGATATATCAGTGAAGATGGAGAAAC  
AAGTGACCAACAGTTGAATCAAAGTATGGACACAGGCTCTCCAGCAGAACTATCTCCTACTACTCTTTCCCCTGT  
TAATCATAGCTTGGATTTACAGCCAGTTACTTACTCAGAACCTGCATTTTGGTGTTCGATAGCATATTATGAATT  
AAATCAGAGGGTTGGAGAAACCTTCCATGCATCAGCCCTCACTCACTGTAGATGGCTTTACAGACCCATCAAA  
TTCAGAGAGGTTCTGCTTAGGTTTACTCTCCAATGTTAACCGAAATGCCACGGTAGAAATGACAAGAAGGCATAT  
AGGAAGAGGAGTGCGCTTATACTACXATAGGTGGGGAAGTTTTTGCTGAGTGCCTAAGTGATAGTGAATCTTTG  
TGCAGAGCCCCAATTGTAATCAGAGATATGGCTGGCACCCTGCAACAGTGTGTAAAATTCCACCAGGCTGTAATC  
TGAAGATCTTCAACAACCAGGAATTTGCTGCTCTTCTGGCTCAGTCTGTTAATCAGGGTTTTGAAGCCGTCTATC  
AGCTAACTAGAATGTGCACCATAAGAATGAGTTTTGTGAAAGGGTGGGAGCAGAATACCGAAGGCAGACGGTAA  
CAAGTACTCCTTGCTGGATTGAACTTCATCTGAATGGACCTCTACAGTGGTTGGACAAAGTATTAAGTCAAGTGG  
GATCCCTTCAGTGCCTTGCTCAAGCATGTCATAAAGCTTCACCAATCAAGTCCCATGAAAAGACTTAATGTAAC  
AACTCTTCTGTCATAGCATTGTGTGTGGTCCCTATGGACTGTTTACTATCCAAAAGTTCAAGAGAGAAAACAGCA  
CTTGAGGTCTCATCAATTAAAGCACCTTGTGGAATCTGTTTCTATATTTGAATATTAGATGGGAAAATTAGTGT  
CTAGAAATACTCTCCATTAAAGAGGAAGAGAAGATTTTAAAGACTTAATGATGTCTTATTGGGCATAAACTGA  
GTGTCCCAAAGGTTTATTAATAACAGTAGTAGTTATGTGTACAGGTAATGTATCATGATCCAGTATCACAGTATT  
GTGCTGTTTATATACATTTTGTAGTTGCATAGATGAGGTGTGTGTGTGCGCTGCTTCTTGATCTAGGCAAACCTT  
TATAAAGTTGCAGTACCTAATCTGTTATTCCCACTTCTCTGTTATTTTTGTGTGTCTTTTTTAATATATAATATA  
TATCAAGATTTTCAAATTATTTAGAAGCAGATTTTCTGTAGAAAACTAATTTTCTGCCTTTTACCAAAAATA  
AACTCTTGGGG

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**FIGURE 5067**

TCCCTCTTCCCTAAGCAGCCTGAGGGTTGACTGGATTGGTGAGGCCCGTGTGGCTACTTCTGTGGAAGCAGTGCT  
GTAGTTACTGGAAGATAAAAGGGAAAGCAAGCCCTTGGTGGGGGAAAGTATGGCTGCGATGATGGCATTCTTAG  
GACACCTTTGGATTAATAATGAAAACAACACTCTCTGAGCAGCTGTTCGAATCATCTGATATTTATACTGAATG  
AGTTACTGTAAGTACGTATTGACAGAATTACACTGTACTTTCCTCTAGGTGATCTGTGAAAATGGTTCGCTATT  
ACTTGACCCGGGAGAACCCACGAAATCATGCAATCAAGAGGTTCCAATCTTCGTGTTCACTTTAAGAACACTCG  
TGAAACTGCTCAGGCCATCAAGGGTATGCATATACGAAAAGCCACGAAGTATCTGAAAGATGTCACTTTACAGAA  
ACAGTGTGTACCATTCCGACGTTACAATGGTGGAGTTGGCAGGTGTGCGCAGGCCAAGCAATGGGGCTGGACACA  
AGGTCGGTGGCCCAAAAAGAGTGCTGAATTTTGTGTCACATGCTTAAAAACGCAGAGAGTAATGCTGAACTTAA  
GGGTTTAGATGTAGATTCTCTGGTCATTGAGCATATCCAAGTGAACAAAGCACCTAAGATGCGCCGCCGGACCTA  
CAGAGCTCATGGTCGGATTAAACCCATACATGAGCTCTCCCTGCCACATTGAGATGATCCTTACGGAAAAGGAACA  
GATTGTTCCCTAAACCAGAAGAGGAGGTTGCCCAGAAGAAAAAGATATCCAGAAGAACTGAAGAAACAAAACT  
TATGGCACGGGAGTAAATTTCAGCATTAAAATAAATGTAATTAAAAGGAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5068**

MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQ  
WGWTQGRWPKKSAEFLHMLKNAESNAELKGLDVDSLVIIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMIL  
TEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE



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**FIGURE 5069**

GCTGAGCATCGCCAGGGCGGGCGGCAGGGCGGGCCTCTCCGCCGGGTGTACCTCCTGTGCGGGCGCGAGACCTC  
TGGTGAAAAGAAAAGATGTTGTCCCGGTTAAGAGTAGTTTCCACCACCTTGTACTTTGGCATGTCGACATTTGCACA  
TAAAAGAAAAGGCAAGCCACTTATGCTGAACCCAAGAACAACAAGGGAATGGCATTCTTACAAGAACGAC  
AAATGCTTGGTCTTCAAGGACTTCTACCTCCCAAAATAGAGACACAAGATATTCAAGCCTTACGATTTTCATAGAA  
ACTTGAAGAAAATGACTAGCCCTTTGGAAAAATATATCTACATAATGGGAATACAAGAAAGAAATGAGAAATTGT  
TTTATAGAATACTGCAAGATGACATTGAGAGTTTAAATGCCAATTGTATATACACCGACGGTTGGTCTTGCCTGCT  
CCCAGTATGGACACATCTTTAGAAGACCTAAGGGATTATTTATTTTCGATCTCAGACAGAGGTCATGTTAGATCAA  
TTGTGGATAACTGGCCAGAAAATCATGTTAAGGCTGTTGTAGTGAATGATGGAGAGAGAATTCTGGGTCTTGGAG  
ATCTGGGTGTCTATGGAATGGGAATTCAGTAGGAAAACCTTTGTTTGTATACAGCTTGTGCAGGAATACGGCCTG  
ATAGATGCCCTGCCAGTGTGTATTGATGTGGGAACGTATAATATCGCACTCTTAAAGACCCATTTACATGGGCT  
TGTACCAGAAAACGAGATCGCACACAACAGTATGATGACCTGATTGATGAGTTTATGAAAGCTATTACTGACAGAT  
ATGGCCGGAACACACTCATTCAAGTTCGAAGACTTTGGAAATCATAATGCATTCAGGTTCTTGAGAAAGTACCGAG  
AAAAATATTGTACTTTCAATGATGATATTCAAGGGACAGCTGCAGTAGCTCTAGCAGGTCTTCTGCAGCACAAA  
AAGTTATTAGTAAACCAATCTCCGAACACAAAATCTTATTCCTTGGAGCAGGAGAGGCTGCTCTTGAATTGCAA  
ATCTTATAGTTATGCTATGGTAGAAAATGGCCTGTGAGAACAAGAGGCACAAAAGAAAATCTGGATGTTTGACA  
AGTATGGTTTATTAGTTAAGGGACGGAAGCAAAAATAGATAGTTATCAGGAACCATTTACTCACTCAGCCCCAG  
AGAGCATACCTGATACTTTTGAAGATGCAGTGAATATACTGAAGCCTTCACTATTATTGGAGTGCAGGTGCTG  
GCCGTCTTTTCACTCCTGATGTAATCAGAGCCATGGCCTCTATCAATGAAAGGCCTGTAATATTGCAATTAAGTA  
ATCCTACAGCACAGGCAGAGTGCACGGCTGAAGAAGCATATACACTTACAGAGGGCAGGTGTTTGTGTCAGTG  
GCAGTCCATTTGGGCCAGTGAACTTACAGATGGGCGAGTCTTTACACCAGGTCAAGGAAACAATGTTTATATTT  
TTCCAGGTGTGGCTTTAGCTGTTATTCTCTGTAACACCCGGCATATTAGTGACAGTGTTCCTAGAAAGCTGCAA  
AGGCCCTGACAAGCCAATTGACAGATGAAGAGCTAGCCCAAGGGAGACTTTACCCACCGCTTGCTAATATTTCAGG  
AAGTTTCTATTAACATTGCTATTAAAGTTACAGAATACCTATATGCTAATAAAATGGCTTTCCGATACCCAGAAC  
CTGAAGACAAGGCCAAATATGTTAAAGAAAGAACATGGCGGAGTGAATATGATTCCCTGCTGCCAGATGTGTATG  
AATGGCCAGAATCTGCATCAAGCCCTCCTGTGATAACAGAAATAGAAAGCACTCCCCTGATAAAATACTTTCTGTGCT  
CCAGGGAACCCCTTTTTTTCAGACAAGAAGAGATAATGTCTTCAGTTTTAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5070**

MLSRLRVVSTTCTLACRHLHIKEKGKPLMLNPRTNKGMAFTLQERQMLGLQGLLPK IETQDIQALRFHRNLKKM  
TSPLEKYIYIMGIQERNEKLFYRILQDDIESLMP IVYTPTVGLACSQYGHIFRRPKGLFISISDRGHVRSIVDNW  
PENHVKA VVVTDGERILGLDGLGVYGMGIPVGKLCLYTACAGIRPDRCLPVCIDVGTDNIALLKDPFYMGLYQKR  
DRTQQYDDLIDEFMKAITDRYGRNTLIQFEDFGNHNAFRFLRKYREKYCTFNDDIQGTA AVALAGLLAAQKVISK  
PISEHKILFLGAGEAALGIANLIVMSMVENGLSEQEAQKKIWMFDKYGLLVKGRKAKIDSYQEPFTHSAPESIPD  
TFEDAVNILKPSTIIGVAGAGRLFTPDVIRAMASINERPVIFALSNPTAQAECTAE EAYTLTEGRCLFASGSPFG  
PVKLT DGRVFTPGQGNNVYIFPGVALAVILCNTRHISDSVFLEAAKALTSQLTDEELAQGRLYPPLANIQEV SIN  
IAIKVTEYLYANKMAFRYPEPEDKAKYVKERTWRSEYDSLLPDVYEWPE SASSPPVITE

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**FIGURE 5071**

GCTAGGGCGCGGCGGGCGGTTTTGAATTTTGCTTACAGAGTCCCGTCTCACCATCCTGGGCTTCCAACGGAGACTG  
CGGTATCCGCAGCTGGAGACCCAGCGCGGAGTAGCCTTTTGCTCCCGGACGGACTTGAGGTTGGAGTCTGTGTGT  
TGGGGACCCTGCCTTTGGAAGCGCCGAGAGGCTTAAAGGATGGCCTCGTCAGATCTGGAACAATTATGCTCTCA  
TGTTAATGAAAAGATTGGCAATATTAAGAAAACCTTATCATTAAAGAACTGTGGCCAGGAACCTACCTTGAAAAC  
TGATTAAATAAAATAGGAGATGAGATCATTGTAATAAATGAACTTCTAAATAAATTGGAATTGGAAATTCAGTA  
TCAAGAACAACCAACAATTCACCTCAAGGAACCTCTGTGAATCTCTTGAAGAAGATTACAAAGACATAGAACATCT  
TAAAGAAAACGTTTCCTTCCCATTTGCCCTCAAGTAACAGTAACCCAGAGCTGTGTTAAGGGATCAGATCTTGATCC  
TGAAGAACCAATCAAAGTTGAAGAACCTGAACCCGTAAGAAGCCTCCCAAAGAGCAAAGAAGTATTAAGGAAAT  
GCCATTATATACTTGTGATGAGTTCAATGGTGTTCCCTTCGTACATGAAATCCCGCTTAACCTATAATCAAATTAA  
TGAATGTTATTAAAGAAATCAACAAGGCAGTAATTAGTAAATATAAAATCTACATCAGCCAAAAAGTCTATGAA  
TTCTGTGACCAGAAATCTCTATCACAGATTTATTGATGAAGAAACGAAGGATACCAAAGGTCGTTATTTTATAGT  
GGAAGCTGACATAAAGGAGTTCACAACCTTGAAAGCTGACAAGAAGTTTCACGTGTTACTGAATATTTTACGACA  
CTGCCGGAGGCTATCAGAGGTCCGAGGGGGAGGACTTACTCGTTATGTTATAACCTGAGTCCCTTGTAACCTTTT  
GAACATACCAACAGGGTATAGAGTATAGAGGCTATTTCTATAATTTTCTTATATATAATTTTTTAACCTTTTAA  
CTTTTTTGTTCCTTTTTTTTTTTTTTTTGTAGACAGGATCTTGCTTTGTACCCAGGGGCTTGCTTTGTACGCGAG  
CTAGAGTGCAGTGGCGCAAACATGGCTCACTGCAGCCTCAACCTCCCAGGCTCAAGTGATCCTCCACCTCAGCC  
CCCTGAATGGCTGGGACTACAAGCGTGCGCCACCATGCCTGGCTAATTTTTGTATTTTTTGGAGAGATGGGGTTT  
CACCATGTTGCCTAGGCTGGTCTTGAGCTCCTGAGCTCAAACAATCCACCCTCCTCAGCCTCCCAAAGTGCTGGG  
ATTACAGGCTTGAGCCACCACACCTGACCTATTCTTGTTCTTATAAAAATAAACTTTTTTGGATAAAGCTTAT  
TTCTTGTTTTTTTCTTTTTTTTTTTTTTTTTTGTAGACAGTCTCGCTCTTTCACCCAGGCCGACTGCAGCGG  
CGCTATCTCGGCTCACTGCAAACTCTGCCTCCAGGTTACGCCATCCTCCTGCCTCAGCTACTCAGGAGAATTG  
CTTGAACCTAGGAGGTGGAGGTTGCAGTGAGCCGAGATCGTGCCACTGCACTCCAGTCTGGGCAACAGAGCGAGA  
CTCCATCTCAGAAAAAAGAAAAAAGACTGGGTACAGATGTGATATTGGAAGAAAAAGATCAAGCTGATGAGGT  
TAGGATACCCAGGCCCTTTGGACTTAAAGATCACTAGTGTCTAAATTCATCGATGGCATTTCAGTCTATAGGTA  
AACTTCCTGGAAGCTGGATTGGAGACAGTTATCATCTGATTATTGGGCTTTCGTATAGGTCTTAGGGAGCAG  
CTTACCTGAAATGCATTTAGTGACACCAGTCTGTAACTTCAACCTGTAATGAAAGTGTAATAAATGTACATTG  
AGTTGATGTGATAATGTGATATAATAAGAAATATATATTGATCTTCCTATCTAGTTCCTTGTTTCAGAGCTCCTA  
AAACCTTGTAATTTCCAAAGTGATGGAGTACATCTTTTGTCTAGTATTTGGTCTTTGACCCAGTTCTTGACA  
CAAAGCTCTAAATTCCTTTAAATTTCCCAGTGATAGGAGAATTTTTTGTCTAATGAGGTCACTCTTGATGGG  
ACCTGGATAACTCAGGATGGGGGCTGCTCACAAAGACCACATCATGATTGGAAGTTCAAACCTTTCAGTCTCCCA  
CCTCCAGAGAGGGGAGAGGGGCTGGAGATTTGTGTCAATAATCCATCAGGCCTATGTCAACAAGACATAATCCGT  
TAACTATGGAGTTCAGGGAGCTTCAGGGTTGGCAAACATTTTGTATGTCCAGGAAGGTGACGCACTCCAGCTTTA  
TGAAGTCAGCAAGTCTGTGCTCAGGATGCTTCTGGACCTTGCCCGAGGTACCCCTTCATGTGGCTGTGTTCAT  
CTGTATCCTTTGTAGTAGCCTTAAATAAACTGTAAACAC

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**FIGURE 5072**

CCGACATGTTGAGTCATAAGACGCGTCGGTGTTCAGTCTGTGTCCTTGAGGTTGACCAGGGCCACTGCAGGCAT  
GGTGCTAGCAGAGCTGTACGTCTCTGACCGAGAGGGAAGCGATGCCACGGGAGATGGAACCAAGGAGAAACCATT  
TAAAACAGGTCTAAAGGCTTTGATGACAGTAGGGAAAGAACCATTTCCTACCATTACGTAGATTACAAAAAGA  
AAATGAGAGGTGGAATGTTATTCTAAATCACAGTTGAAGAACATTAAAAAGATGTGGCATAGGGAACAAATGAA  
GAGTGAATCCCGGAAAAGAAAGAGGCAGAAGATAGTTTACGAAGAGAAAAGAACCTGGAAGAAGCAAAGAAGAT  
TACCATTAAAAATGATCCAAGTCTCCAGAGCCAAAATGTGTGAAGATTGGTGCCTTAGAAGGATATAGAGGCCA  
AAGAGTAAAGGTGTTTGGCTGGGTCCACAGGCTGCGCAGGCAAGGAAAAGAAATTTAATGTTTCTGGTGTTCGAGA  
TGGTACAGGTTATCTTCAGTGTGCTTGGCGGATGAGTTGTGTGCTAGTGCTACAATGGAGTTCTCTTGTCCACGGA  
GAGCAGTGTTCAGTGTATGGAATGCTAAATCTTACCCCAAAGGGCAAGCAGGCTCCAGGTGGCCATGAGCTGAG  
TTGTGACTTCTGGGAACATAATTGGGTTGGCCCCCTGCTGGAGGAGCTGACAACCTGATCAATGAGGAGTCTGACGT  
TGATGTCCAGCTCAACAACAGACACATGATGATCCGAGGAGAAAACATGTCCAAAATCTAAAAGCACGATCCAT  
GGTCACCAGGTGCTTTAGAGATCACTTCTTTGATAGGGGTACTATGAAGTTACTCCTCCAACATTAGTGCAAC  
ACAAGTAGAAGGTGGTGCCACACTCTTCAAGCTTGACTATTTTGGGGAAGAGGCATTTTGAATCAATCTCTCA  
GTTGTACTTGGAGACCTGCCTCCAGCCCTGGGAGATGTTTTTGTATTGCTCAGTCATACCGGGCAGAGCAGTC  
CAGAACACGAAGGCACCTGGCTGAGTACACTCAGTGAAGCTGAGTGTCTTCTGACTTTTGACGACCTCTT  
GAACCGGTTGGAGGACTTGGTTTGTGATGTGGTAGATCGAATATTGAAGTCACCTGCAGGGAGCATAGTGATGA  
GCTCAACCCGAACITTCAGCCCCCAACCGCCTTTCAAACGGATGAATATTGAGTGTATCGTTTGGCTAAA  
AGAACATGATGTAAAGAAAGAAGATGGAACCTTCTATGAATTTGGAGAAGATATCCAGAAGCTCCTGAGAGACT  
GATGACAGACACCATTAAATGAACCAATCTTGCTGTGTCGATTTCTGTGGAGATCAAGTCTTCTACATGCAGCG  
ATGTCTGAGGATTCCCGTCTTACTGAATCTGTGACGTGTGATGCCCAATGTTGGTGAGATTGTGGGAGGCTC  
AATGCGTATCTTTGATAGTGAAGAAATACTGGCAGGTTATAAAGGGAAGGGATTGACCCACTCCCTATTACTG  
GTATACGGATCAGAGAAAATACGGTACATGTCCCATGGAGGATATGGCTTGGGCTTGGAACGATTCTTAACGTG  
GATTCTGAATAGGTATCACATCCGAGACGTGTGCTTATACCCTCGATTTGTCCAGCGTTGCACGCCATTAACCAT  
TTCTCCAGAAGCGTGGAGGAAAGATTATGAAAGGAACAGGCTCTTTAAAAAAGAAAACAAAAGCCAGAATCTTC  
CTTTTTTTTGTTCATTGGGGTTTCTCTTCTGTTTTCTTCTACTACCATAAAAACTATCTCAAATCACCTGA  
ACATCAAGTGATATTAAAGTTGTATCTTAAGAAAAAATATCCATTTTTTTCTTAAGTTTCGGGAAACAAAGTTCCG  
GGGAAAATACCTGGCATGAACTGTAGTTAGGGATACATTTACGATTTTACTCACTTTATCCAAGTTATTCTT  
TTATTCAAGTTATATGTATGTATAATTCAACAATTTTAGATTATGGTGTAGATACTCCAGTAACCTTATCTTTCT  
GTCTTTTTAAGTGACCTGGAATTCTTTGATTTATTTTATTGCATCAATGAATAAAAACAAAATCTTGGGGGAA  
GAAATTGGCAATATCGTATAAAAAATCTGCTCATATTAGAACACAGTATAATTGAGCAGTAAACACTAGAATCAAA  
TGAATAGCCTTTTGTATCAGTTATTAATCTTTCTAACTCTGCTTAGCTGCTAATAATCCTGAGGCATAGAAATT  
GAAGAATTTGAAAAATAGAATTGCCTTAAAGGATTTGAAGTAAGAACATAATTTGGGGAGAGTTTTTTAGTGA  
TTCACAGTATCCCTCTTAGCATTAAATTAAGGTAAAGAGGCAGATTGATTTCCCTCTTTCTGGTAATTCCTAA  
GTAATTAAGAATAAATAAGTTCCAAAAGAAATGTAGCTGGAATCTTAATAACAATTTGTAGTGGCTGTTTGTAGT  
TGCCCCCACCATGTCCTTAGATCTAATCTGTGCTACCTTATTAACCTCACAGCAGGCTTACTGAATGGCTTCATT  
CAGATTTAGTTGATTTCTCCACCAATGCATGTATCTCAATAGGCTGTATTCCAGCAGTCAATAAATG  
AACACCCGTA AAAA

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**FIGURE 5073**

MVLAELYVSDREGSDATGDGTKEKPFKTGLKALMTVGKEPFPTIYVDSQKENERWNVISKSQKNIKKMWHREOM  
KSESREKKEAEDSLRREKNLEEAKKITIKNDPSLPEPKCVKIGALEGYRGQRVKVFGWVHRLRRQGKNLMFLVLR  
DGTGYLQCVLADELCCYNGVLLSTESSVAVYGMLNLTPKGKQAPGGHELSCDFWELIGLAPAGGADNLINEESD  
VDVQLNNRHMMIRGENMSKILKARSMVTRCFRDHFFDRGYEVTPTLVQTQVEGGATLFLKLDYFGEEAFLTQSS  
QLYLETCLPALGDVFCIAQSYRAEQSRRRLAEYTHVEAECPFLLTFDDLLNRLEDLVCDVVDRIKSPAGSIVH  
ELNPNFQPPKRPFKRMNYSDAIVWLKEHDVKKEDGTFYEFGEDIPAPERLMTDTINEPILLCRFPVEIKSFYMQ  
RCPEDSRLTESVDVLMFNVGEIVGGSMRIFDSEEILAGYKREGIDPTPYWYTDQRKYGTCPHGGYGLGLERFLT  
WILNRYHIRDVCLYPRFVQRCTP

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**FIGURE 5074**

CGGCCAGCGACGCGGTTACCTCCTGCTGCTCGCCCTCGCCCCGCGAGCTGCCCCGACGCGAGATGTCTTA  
TTTACCAACAAATCCACCAGGGAGCATTCTTATTGCTGGCTCGGCGTCTCTCTCAGCAGTCACCGGAGTGCCGG  
AGGGGGAAGCGGATTACGGAAGACTATTACCCAGAAGAAAAGATGTTTGTTCACAGCCAAAGATGTACC  
GAAGTATAGAGGGCTACTGTATTGTCAGAGCTAAGTCTCCAGTTCTCGATTCACTGACAGTAAACGCTATGAAA  
AGGACTTCCAGAGCTGTTTGGATTGCATGAGACTCGTTCCAGGAGACATCTGCAATGCCTGTGTCTGCTGTGAA  
AAGATGGAAGAAGTTGCCAGCAGGATCAAAAAAAAAAAGTGAATCATGTGGTAGATGCAAGGGTTGGACCCAGT  
CTAAAGACTACATTGAAACCAAAGAAAGTGAAACTCTATCTGGGAACAGGATAAAAAGCAACCAGATCAGTAA  
CTGCAGAAGGAATTTAAACGTCATAATTCTGATGCTCACAATACCACCTCAAGTGCCTCCCCAGCTCCATCTCCT  
CGTTACAGTAACCAGTCAGATGACGCTCAGATACAGAGATGGCTTCTGGTTCTAACAGAACACCAGTTTTTTTC  
TTTTAGATCTCACATACTGGAAGACAGAAGATATGTTGTGGGATCAACTATAAAGGCCGTTTTGGGGAAGTC  
CTCATTGACACACATCCCTTCAAGCCTTGCTGCAGCAATAAGAAAGCAGCTGCCGAGAAGCCAGAGGAGCAGGGG  
CCAGAGCCTCTGCCATCTCCACTCAGGAGTGGTGACTGAGGTTTTTATGTAGAAGGGGAACAAAAAATCTGA  
ATTTTGAAAGACCACAAAGCAGCAAACTGACCCTCTTTTTTTTTTTTTTTTTTTTTTTTGTAGACGGAGTTT  
TGCTCTTGTTACCCAGGCAGGAGTGCAGTGGCGTGATCTGGCTCACTGCAACTTCCGTCCTCCGGGTTCAAGTG  
ATTCTCCTGCCTTAGCCTCCCAAGTAGCTGGGTTTATATGTGCCGCCACCAGACCCGGCTAATATTTTAGTTTT  
AGTAGAGACGGGGTTTACCACATTGCCCAGGCTGGTCTCAAATGACCCTCTATTTTTAACTTGATACCTGCT  
ATTCTGCCAAAAGACAATTTCTACAGTAGTTTTGAATGGGTTGATATCCCTAGTCCCACAACTCTGAAGCCAG  
TGTCAGCTTACTAAAAAAGAGTGGTACATAATTTAAGATGCTGAGTATTCATAGGAAAGATGAATGCTGC  
TGTAAGTACTCTTTAAGTCTTTTTTTTTTTTAAATCCCTTCTAATGAATGAACTAGGGGAATTCAGGGGACA  
GAGATGGGATTTGTTGTATGATAAACTGTATGTAGTTTTTAGTCTTTCTGTATTGAGATGCAGTGGTTGGGGCAT  
TTTTAAGATGGCTGGCTACTTGTTCCTCATGATAATAAATTTGTCATAACTCAGTAACATGAACCTGCCCT  
AGAGGTAGTTGTTAATGATTTTGAAATATTAAGGTCTTGCCAAGCTTGATGATTCAAACCTGTACTACTGATT  
ATTAAGCAGGACAGACTGAGCTTTCTGTGCAATACCTTGAGGAGAAAGTAACTTCTAAATATACAGAGAGGT  
AACTTGACTATATATGTTGCATCCTGTGCTCCCTTCATATTAATTTGATAAAGATTTTAAATTTTGTAAGC  
TTCTAAAGCAGAATCAAAGCTCCTCTTGGGGAAATGGCAAGTCTTAGGACAGGCGAGACCCTGTATGAATAGTA  
CCAAAGCATTACCGCATGGTAGAGAACACACTCGATTAAAAATGTTAAGCTATCTGAAAAATAAATGTACAAGT  
CCTCAGGATGGCACAACAAAGGTTAATGCTTCTTGGGGCACATTTCTTAGAGGGCTTGCTGAGTGTGTAATA  
TAATCGACTTTTGTGTTGTTCTGTGACTTCATTGAAAATCTTTACAATTCAGTTTCAGCTCTGGATTACTTCAG  
TTGACCTTTGTGAAGGTTTTATCTGTGTAGAATGGGTGTTGACTTGTTTTAGCCTATTAAGTTTTATTTCT  
TTCACTCTGTATTAAGTAAACTTACTAAAAGAAAAGAGGTTTGTGTTACATTAATGGTTTTGGTTTTGGCT  
TCTTTTAGTCAGGCTTTCTGAACATTGAGATATCCTGAACCTTAGAGCTCTTCAATCCTAAGATTTTCATGAAAAG  
CCTCTCACTTGAACCTAAACCAGAGTACTCTTACTGCCTCTTTCTAAATGTTCAAGGAAAAGCATCGCCAGTTCCG  
GTCTTTTCAGAATGAGGGAGAAACATTTGCCTGCCTTGTAATAACAAGACTCAGTGTCTATTTTTAAACTGCAT  
TTTAAAAATTGGATAGTATAATAACAATAAGGAGTAAGCCACCTTTTATAGGCACCCTGTAGTTTTATAGTTCTT  
AATCTAAACATTTTATATTTCTTCTTTTGAAAAAACCTACATGCTACAAGCCACCATATGCACAGACTATACA  
GCGAGTTGAGTTGGCTTCTCCACAGTCTTTGAGGCGAATTACAAAAGTCCAGCCATTATCATCTCCTGAGTTA  
TTTTGAAATGATTTTTTTGTACATTTTGGCTGCAGTATTGGTGGTAGAATATACTATAATATGGATCATCTCTAC  
TTCTGTATTTATTTATTTACTAGACCTCAACCACAGTCTTCTTTTTCCCTTCCACCTCTCTTTGCCTGTAG  
GATGTACTGTATGTAGTCATGCACTTTGTATTAATATATTAGAAATCTACAGATCTGTTTTGTACTTTTTATACT  
GTTGGATACTTATAATCAAACTTTTACTAGGTATTGAATAAATCTAGTCTTATTAGAAAATAAAAAAAGAA  
AGAAA

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**FIGURE 5075**

GCTGTCCTCGCCCTCGCCCCGGCGAGCTGCCCCGACGCGAGATGTCTTATTTACCAACAAATCCACCAGGGAGC  
ATTCTTATTGCTGGCTCGGCGTCTCTCTCAGCAGTCACCGAGTGCCGGAGGGGGAAGCGGATTTACGGAAGA  
CTATTACCCAGAAGAAAAGATGTTTGTTCACAAAGCCAAAGATGTACCGAAGTATAGAGGGCTACTGTATTTG  
CAGAGCTAAGTCCTCCAGTTCTCGATTCACTGACAGTAAACGCTATGAAAAGGACTTCCAGAGCTGTTTGGATTG  
CATGAGACTCGTTCAGGAGACATCTGCAATGCCTGTGTCTGTGTGAAAAGATGGAAGAAGTTGCCAGCAGGA  
TCAAAAAAAAAAACTGGAATCATGTGGTAGATGCAAGGGTTGGACCCAGTCTAAAGACTACATTGAAACCAAAGA  
AAGTGAAAACCTCTATCTGGGAACAGGATAAAAAGCAACCAGATCAGTAACTGCAGAAGGAATTTAAACGTCATA  
ATTCTGATGCTCACAATACCACCTCAAGTGCCTCCCCAGCTCCATCTCCTCGTTACAGTAACCAGTCAGATGACG  
GCTCAGATACAGAGATGGCTTCTGGTTCTAACAGAACACCAGTTTTTTCCTTTTGTAGATCTCACATACTGGCCTC  
ATTGACACACATCCCTTCAAGCCTTGCTGCAGCAAT

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**FIGURE 5076**

ACTTCTGCCCTTTTGGCTCTCTGACCAGCACCATGGTGGTGGGCAAGAACAAGCACCTTACGAAAGGCGGCAAAA  
AGGGAGCCAAGAAGAAAGTGGTTGATCCATTTTCTAAGAAAGATTGGTTTGACGCGAAAGCACCTACTACGTTCA  
ATATAAGAAATATTGGAAAGACGCTCATCACCAGGACCCAGGGAACCAAAATTGCATCTGATGGTCTCAAGGGTC  
GTGTGTTTGAAGTGAGTCTTGCTGATTTGCAGAATGATGAAGTTGCATTAGAAAATTCAGCTGATTACTGAAGA  
TGTTCAGGGCAAAAACCTGCCTAACTTCCATGGCATGGATCTTACCCATGACAAAATGTGTTCCATGGTCAAAAAA  
TGGCAGACAATGATTGAAGCTCATGTTGATGTCAAGACTACCGATGGTTACTTGCTTCGTCTTTCTGTGTTGGT  
TTTACTAAAAACGCAGCAATCAGATACGGAAGACCTCTTATGCTCAGCAACAACAGGTCCGCCAAATCCGGAAG  
AAGATGATGGAAATCATGACTCGAGAGGTGCAGACAATGACGTGAAAGAAGTGGTCAATAAATTGATTCCAGAC  
AGCATTGGAAAAGACATAGAAAAGACTTGCCAATCTATTATCCTCTCTATGATGTCTTCGTTAGAAAAGTAAAA  
ATGTTGAAGAAGCCCAAGTTTGAAGTGGGAAAGCTCATGGAGCTTCATGGTGAAGGCAGTAGTTCTGGAAAAGCT  
GCTGGGGACGAGACAGGTGCTAAAGTTGAATGAGCTGATGGATATGAACCACCAGTCCAAGAATCTGTTTAAAGT  
TCAGACTTCAAATAGTGGCAAATAAAAAGTGCTATTTGT



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**FIGURE 5077**

MDLTHDKMCSMVKKWQTMIEAHVDVKTDDGYLLRLFCVGF TKKRSNQIRKTSYAQQQQVRQIRKKMMEIMTREVQ  
TNDVKEVVNKLIPDSIGKDIKTCQSIYPLYDV FVRKV KMLKKPKFELGKLMELHGEGSSSGKAAGDETGAKE

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**FIGURE 5078**

ATGAAAGAGGCCATCGGATGCGAGGACATCAGCCCAGTAACTTTGAGGGAAGAAGGTTTTCTTCCCCTGCTGCC  
TATGCCGTGGGGTTTGAGCACGTCTCTCGGGGGGAAGTCATGGCCCATAGCCAGCTTGCTGCAATGGAAGCGATG  
CTTACAGTAAGGCGAGTTCCCTGGACACGATATATGAGAGTGAGGACACAGTGCCAGAGTTGGGAGTTGACCGA  
ACCTACCTTCAGATGGGATTTCTGCTTGAAAACCAGGAAGCAGAACTCAGATGTGAATTACGCTTTCTAGACATT  
CAACTGCTATCAAAGAATAATTGCCATGCTAAATTATTTATATTTGTGGAGCAAATGACTTTAGGCACTAAGGCT  
TTTATCTCTTCCCCTGAGGAACCTTTTGAACCTTTGTTTTCTTGAACCTCTATGCCATCCAGGCAGGGGGATTAGAA  
GAACCTCCTAATCTGAGTAATTTGAATAAACTGAGGGAAATTGTGAAAAGAAAGATTACAAGGTGATGAAAAAG  
AGAGTAGATAATGAAGAGGGTGTA AAAACTTATAAGGTACTGGAAAGGGCAGCCATGAAATTCCTGACCATGGAA  
CCCAAAC TGAGAGATGACAGACTTGAAGGATATGGAGAAAAAGATTCAAGTTCTTGCGGAGAAGGTCATGTTCA  
GAAGCAAGTAAGGTAGTGAGAGCGTACTTACAACCTTATCGTGTGGAAGCTGCTCAGTGATGAGACTGGGAAAGAT  
GAATATGCGTACGCTCTTTCACCTCACAGCAAAATCACTAAGCTTCTCTGAGGGTATAGGATACTTTCTTTTCTAT  
GGGTCAGTGATGGTCATTACTGGAAGTTCCCATCACTTCCCGGTCCATCTTCCTGTGCTGGAGAACAACCTAAA  
CACGAGGGTTGGGGAACTGA

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**FIGURE 5079**

MKEAIGCEDISPVTLREEGFPSPAAYAVGFEHVSERGEVMAHSQLAAMEAMLTVRRVPWTRYMRVRTQCPELGVDR  
TYLQMGFLLLENQEAELRCELRFLDIQLLSKNNCHAKLFIFVEQMTLGTKAFISSPEEPFELCFLELYAIQAGGLE  
EPPNLSNLNKLREIVEKKDYKVMKKRVDNEEGVKTYKVLERAAMKFLTMEPKLRDDRLEGYGEKDSSSWRRRSCS  
EASKVVRAYLQLIVWKLLSDETGKDEYAYALSLTAKSLSFSEGIGYFLFYGSVMVITGSSHHFPVHLPVLENKPK  
HEGWGN

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**FIGURE 5080**

ATGGTCTATGGAATTAAAAAATATGGTCCCTTTGTTGCAGACTTTGCTGATAAACTCAATGAGCAAAACCTTGCC  
CAACTAGAAGAGGCGAAGCAGGCTTCCATCCAACAAATCCAGAATGCAATTGATATGGAGAAGTCACAACAGGCA  
CTGGTTCAGAAGCGCCATTACCTTTTTGATGTGCAAAGGAATAACATTGCTATGGCTTTGGAAGTTACTTACCGG  
GAACGACTGTATAGAGTATATAAGGAAGTAAAGAATCGCCTGGACTATCATATATCTGTGCAGAACATGATGTGT  
TGA

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**FIGURE 5081**

MVYGIKKYGPFVADFADKLNEQNLAQLEEAKQASIQQIQNAIDMEKSQQALVQKRHYLFQVQRNNIAMALEVTYR  
ERLYRVYKEVKNRLDYHISVQNMMC

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**FIGURE 5082**

ACGTGGTACGGAAACCGGCGCCGCGCTTGCTGCTGGTAACAGGGCCTTGCCCTAGTGGGCCTTCCTTCCCAGGTGCG  
CCCTCAGTCTCCACTAGAGACAGGACTGACCAGTTGCTCTTCCTTCCAAGAACCTTCGAGATCTGCGGTCTGGGG  
TCTGGTTGAAAGATGGCGGCCCTCACTACCCTGTTTAAGTACATAGATGAAAATCAGGATCGCTACATTAAGAAA  
CTCGCAAAATGGGTGGCTATCCAGAGTGTGTCTGCGTGGCCGGAGAAGAGAGGGCGAAATCAGGAGGATGATGGAA  
GTTGCTGCTGCAGATGTTAAGCAGTTGGGGGGCTCTGTGGAACCTGGTGGATATCGGAAAACAAAAGCTCCCTGAT  
GGCTCGGAGATCCCGCTCCCTCCTATTCTGCTCGGCAGGCTGGGCTCCGACCCACAGAAGAAGACCGTGTGCATT  
TACGGGCACCTGGATGTGCAGCCTGCAGCCCTGGAGGACGGCTGGGACAGCGAGCCCTTCACCCTGGTGGAGCGA  
GACGGCAAGCTGTATGGGAGAGGTTGACTGATGATAAGGGCCCGGTGGCCGGCTGGATAAACGCCCTGGAAGCG  
TATCAGAAAACAGGCCAGGAGATTCTGTCAACGTCCGATTCTGCCTCGAAGGCATGGAGGAGTCAGGCTCTGAG  
GGCCTAGACGAGCTGATTTTTGCCCCGAAAGACACATTCTTTAAGGATGTGGACTATGTCTGCATTTCTGACAAT  
TACTGGCTGGGAAAGAAGAAGCCCTGCATCACCTACGGCCTCAGGGGCATTGCTACTTTTTTCATCGAGGTGGAG  
TGCAGCAACAAAGACCTCCATTCTGGGGTGTACGGGGGCTCGGTGCATGAGGCCATGACTGATCTCATTTTTGCTG  
ATGGGCTCTTTGGTGGACAAGAGGGGGAACATCTGATCCCCGGCATTAAAGAGGCCGTGGCCGCGCTCACGGAA  
GAGGAGCACAAGCTGTACGACGACATCGACTTTGACATAGAGGAGTTTGCCAAGGATGTGGGGGCGCAGATCCTC  
CTGCACAGCCACAAGAAAGACATCTCATGCACCGATGGCGGTACCCGTCTCTGTCCCTCCATGGCATCGAAGGC  
GCCTTCTCTGGGTCTGGGGCCAAGACCGTGATTCCCAGGAAGGTGGTTGGCAAGTTCTCCATCAGGCTCGTGCCG  
AACATGACTCCTGAAGTCGTGCGCGAGCAGGTACAAGTACCTAACTAAGAAGTTTGCTGAACTACGCAGCCCC  
AATGAGTTCAAGGTGTACATGGGCCACGGTGGGAAGCCCTGGGTCTCCGACTTCAGTCACCCTCATTACCTGGCT  
GGGAGAAGAGCCATGAAGACAGTTTTTGGTGTGAGCCAGACTTGACCAGGGAAGGCGGCAGTATCCCGTGACC  
TTGACCTTTCAGGAGGCCACGGGCAAGACGTGATGCTGCTGCCTGTGGGGTCAGCGGATGACGGAGCCCACTCC  
CAGAATGAAAAGCTCAACAGGTATACTACATAGAGGGAACCAAGATGCTGGCCGCGTACCTGTATGAGGTCTCC  
CAGCTGAAGGACTAGGCCAAGCCCTCTGTGTGCCATCTCCAATGAGAAGGAATCCTGCCCTCACCTCACCCCTTT  
CCAACCTGCCCAGGGAAGTGGAGGTTCCCTCTTTCCCTTTCCCTCTTGTGAGGTATCCATGACTTTAGAGAACAG  
ACACAAGTGATCCAGCTGTCCACGGGTGGAGCTACCCGTGGGCTTATGAGTGACCTGGAGTGACAGCTGAGTC  
ACCCTGGGTAAGTTCTCAGAGTGGTCAGGATGGCTTGACCTGCAGAAGATACCAAGGTCCAAAAGCACAAAGGTC  
TGCGGAAAGTTCTGGTTGTGCGCCGGGCACCACGGCTCACACCTATAATCGAGCACTTTGGGAGGCCAAGACAGG  
AGGATCACTTGAGGCCAGGAGTCTGAGACAAGCCTAGGCAACAAAACAAGACTCTGTCTCTACAAAAAGTTTAAAG  
AAATGAGCCAGACATGGTGGTGTATGCCTGTAGTCCCAGCCACTCAGAAGGCTGAGGCAGGAGGATCGCTTGAGA  
CCAAGAGTTTGAGCCTGCGGTGAGCTGTGAATGCACCACGGCACTCAAGCCTGGGCAATGTAGCAAGATCCTGTC  
TCTACAAGAAATTTTTTAAAAATGAGCCAAGTGTGGTGGTGCATGCCTGTAGTTCCAGCTACTCAGGACACTGAC  
GTAGGAGGGTTGCTTGAGACTGAGAGTTGGAGGCTGCGATGAGCCATGAATGCCCCACTGCACTCCAGCCTGGGC  
GACAGAACGAGACCCCATCTCAAAAAAATAAGTTCTGGTTGTCATTGAATTGGGATAAACAGAGAGCTTGATGC  
TTTCTGCCTTCTGTCTCAGGTGATGCATTGCACATTTGGGATATTTGAAAGGAAATGAGGAAAGAAATTAGGGC  
CTCCTCTGATCTCTCGCTATCTGCGGCTCCTGTCCCTTTTCTCAAGACCTTCACCATTACTGGCATTTCCTGTCT  
TCTCTTTAGTATGATCCCTCAAAACCTCACTAACTGGAAGGATGATTTTGTCTCAGTTGTACTCCTAAATAAAA  
AGTAAACATGACACCTCT

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**FIGURE 5083A**

AATCTGAGAGAGGCCGAGTGGAGTTTCGGTCCTTCTCTGAACACTTTTAGCTGAGAGTACCAGCATCCAACCTGGGA  
GCGTTGTCAATTGCATTTCCACATTCCCAGGAAAGCCAGGTGCTGGCTGCCAGCTGCTGCGCCCCCATGTAGAA  
GGTGCACCTCCTGGGAGCAGGCACGTCTTTGGCTCTTCTGACCATGGAGAGATAGGACGGTCCCTGCAGCCCCG  
GCGACAGAAAGCTGTGCCGCCACCACCGGCCGCGCCGTCCTTCGGATGGATCGCAACAGAGAGGCCGAGATGGA  
GCTGAGCGGAGGCCCCAGCCCCACCAGGGCCGCGGGGCCACGAGGTGGATGGGGACAAGGCTACCTGCCACAC  
CTGCTGCATCTGCGGCAAGAGCTTCCCCCTCCAGAGCTCGCTTTCGACGACATGCGCAAGCACACGGGCGAGAA  
GCCCTACAAGTGTCCCTACTGCGACCACCGGGCTTCCCAGAAGGGCAACCTGAAGATTACATCCGGAGCCACCG  
CACGGGGACTCTGATTACAGGGACACGAGCCGAGGCGGGCGAGGCGCCGCTGGGTGAGATGCGCGCCTCCGAGGG  
CCTGGACGCCTGCGCCAGCCCCACCAAGAGCGCCTCGGCCGTGCAACCGGCTGCTGAACGGGGCCTCGCAGGCCGA  
CGGCGCCAGGGTCTGAAACGGGGCCTCGCAGGCCGACAGCGGCAGAGTCTGCTGCGGAGCAGCAAGAAGGGGGC  
AGAGGGGTCCGCATGCGCCCCGGGGGAGGCCAAGGCAGCGGTCCAGTGCTCCTTCTGCAAGAGCCAGTTCGAGCG  
TAAGAAGGACCTGGAGCTGCACGTGCACCAGGCGCACAAAGCGTTCAAGTGCAGGCTGTGCAGCTACGCGACGCT  
GCGGGAGGAGTCTGCTGCTGAGCCACATCGAGAGGGACCACATCACCGCGCAGGGGCCCGGACGCGGAGGCGCTG  
CGTGGAGAACGGCAAGCCCCGAGCTGAGCCCCGGGGAGTTCCCGTGCAGGTTGTGTGGCCAGGCCTTCAGCCAGAC  
CTGTTTCTGAAGGCGCACATGAAGAAGCACCGGGGCTCCTTCGACCACGGCTGCCACATCTGCGGCCGTAGGTT  
CAAGGAGCCCTGGTTTCTCAAGAACCACATGAAGGCGCACGGCCCCAAGACGGGCAGCAAGAAGAGGCCCAAGAG  
TGAGCTGGACCCCATCGCCACCATCAACAACGTGGTCCAGGAGGAGGTGATCGTCGCGGCCCTGAGCCTCTACGA  
GGTCTGCGCAAGTGCGGGAACCTGTTTACAAACCTGGACAGCTTGAACGCCACAATGCCATCCACCGCAGAGT  
CGAGGCCAGCGCACGCGCGCCCCGGCCGAGGAGGGGGCGAGGGGCCCTCGGACACCAAGCAGTCTTCTCTCCA  
GTGCTGAACCTGAGGCCGTGCGCGGCGCGGCGACTCGTGCCCTGGCACGCGAGGCCGACGCGGGTGGCTGAGCT  
GGACCCGGTCAACAGCTACCAGGCCTGGCAGCTGGCCACGCGGGGTAAAGTGGCCGAGCCGGCCGAGTACCTCAA  
GTACGGGGCCTGGGACGAGGCGCTGGCCGGGGACGTGGCCTTCGACAAGGACAGGCGCGAGTACGTCTGTTGAG  
CCAGGAGAAGCGCAAGCGTGAGCAGGATGCACCAGCCGCGCAGGGGCCCGCGGAAGCGCGGAGCGGGCCTGG  
GGACCCCGCGCCCGCGGCCACCTCGATCCCCGCTCGGCCGCGCGCCCCAACCGCAGGGCCGCGAGCCACCACCGG  
CCAGGGCAAGTCTCTCGAGTCTTCGAGTGCGGCAAGATCTTCCGCACCTATCATCAGATGGTGTGCACTCACG  
CGTGCATCGCCGCGCGCGCCGCGAGAGGGACAGTGACGGGGACAGGGCGGCGCGGGCCCGCTGCGGATCACTCAG  
TGAGGGTGACTCGGCCTCCCAGCCAGCAGCCCTGGCTCCGCCTGTGCGCTGTGACTCCCCGGGCTCTGGCCT  
GGCCGACGAGGCTGCCGAAGACAGTGGTGAGGAGGGCGCCCTGAACCTGCACCAGGGGGACAGCCGCGCCGCTG  
CTGCTTTTCCGAAGAGGTGACTTCGACCGAGCTCTCCAGTGGAGACCAGAGTACAAGATGGGAGATAACGCCTC  
GGAAAGAGACACCGGCGAGTCCAAGGCAGGGATCGCAGCTTCTGTGTCCATACTGAAAACAGTAGCAGAGAGAC  
TTCTAGAAGGCAAGAGCAGCACAGATTTTCTATGGACTTAAAGATGCCAGCATTTCACCCCAAGCAGGAGGTGCC  
CGTCCCTGGTGATGGTGTGGAGTTCCCTTXXCAGTACGGGAGCGGAGGGCCAGACGGGTACCCCTGCAGAAAAGC  
TGTCCGATTTGCACAACAAGGAACACTCTGGGGGAGGGAAGCGGGCGCTGGCCCCAGACCTCATGCCCTAGATT  
TAAGTGCAGGTCGACGCGGGATGACCCAGCAATAAGGAGACGGCCTCCTCCCTGCAGGCGGCTTAGTCTGTTT  
ACCCGTGTCTTACTGCAGCCACAAGACCTACTACCCCGAGGTCTGTGGATGCACAAACGCATCTGGCACCGCG  
TCAGCTGCAACTCCGTGGCTCCCCGTGGATTAGCCCAATGGTTACAAAAGCATCAGAAGCAATTTXGGTTTTT  
CTTTCCCGGAGCGGACGCACGGGCCCCCGCCTGCCCTCGGTGGCAAAGAATGCCAGCCTTTGCTCCTTGCTCXG  
GTTACCCGCACTCAGGTGCCAGGGGGGATGCCGGGGTCCAAAAGTGGCTCTTCTCCCCCTGGGAGTGGTCAAAA  
AGCCGCTAGCATGCCTAAGAATAAGGAGAGCCATTCCGGAGGTCCCTGCGCTCTGTGGGCGCCCGGCCCTGACGG  
GTATCGACAGACCAACCTTGTACGGCCAGGAGCCACATGGCGCGGCCACACAGGGGGCCCTGGCCAAGCCCAG  
GCAGGAGGCTAGCTCCAACCGGTGCTGCCCCGCGXGTGGCGGGGGCTTCAGCAGGAGCGCCACCCCTACGCCCA  
CCGTATCGCCCGGGCTGGCGCGCAGCCCTCGGCCAATAGCAAGCCTGTGGAGAAGTTTGGGGTCCCCCAGCGG  
GGGCTGGCTTTGCCCCACAAATAAGCACAGTCCCCCGGACTCCCTGAAAGCCAAATTAGTGCTCAGCCTCAGG  
GTCCACCTCTGCAAAGGGCGAAGGGGGCGCTCCTCCTTACCTCCCCGCGAGCCCCCTCGAAGGCAGCCCAGG  
AGCTGAGGACTCTGGCCACCTGTGCTGCGGGGTCCAGGGGCGACGCGGCCTTGCAAGGCCAGCCGCGGTGGCTG  
GGGCGCCCCCGCTCTACACTCATCAACAGGXAGCCGGTGGCCGAGGGGCATGAGAAGCGCCTGGACATCCT  
CAACAXTCTTTAAGACGTACATTXCAAAGGACTTTGCGACCCCTTACCAGGGATGGGGTGTGAGCGGCCCTGGG  
TTGGAGCACAGAGGGACACTCCGACGCGAGGCCCGGCCAGGAGAGTTCGTCTGCATCGAGTGCAGAAAGAGCTTC

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**FIGURE 5083B**

CACCAGCCCGGCCACCTCAGGGCCACATGCGGGCACACTCAGTGGTGTTTGAGTCCGATGGGCCTCGGGGTTCT  
GAAGTTCATACCACCTCCGCAGACGCCCCAAACAAGGGAGAGACCATTCTAACACAGGTACCGTCCAGACAGTG  
CCTCTGAGAAAGGGAACCTAAAGGCGTGTTCGACGCACCCAGGTCCCGTAACGGCCATTAGCAGTACCCTC  
ACGATGTCCCAGCAGCCTCCACCTGTGACCTGGCCGCTCCATGGAAGAACAGCCGGGGAACCTCTGAGCAGACA  
CCTCACATCCCGAGCCGCTGCGCTGGAGTGGAAGTGAAGGCAGATGCCTCTCCTTGTTAAACGTTTCAAGAAATA  
ATGAAGATGCTATATTCTAGAAATACATGTAGATACTATATACGCATTTACGTGCTCATCGTCCATAGTCCATA  
TTTTCTTATAATAAACAGTAGTACTGGCAGGCACAGTAGGGGCACAAGGCATCTGTCTTATTCAAGACAAGTTTG  
AGACACTGGAAAAAAGATACTTGTTGTGTGTGTGGACAGAGTGCGAGGCTGAGCACTGTACAGGGGCCTCC  
CAITGTTAAGAGGGACTGTGGGGATGATGTCAGAACAAGACGTGGTGGATTGAGGTTGATCGAGTATTAATACTA  
CTGCCCTCTCCTTGCTTAGTGGGTATTTAAATAGTAAATAAGAGAGAGGAAGGAGGTGACGTTACAGGTGCTGTG  
GGAAGCAGGCTTGCGGGAGGGGTATGATGATGAGACCCTCATTGTTCACTGGCTCCATCGCACTCCTCCCTGGGG  
CCGTGTGCTGTTCATTCTTCCACCATTGCAACTGAGCGAATCTGGCAAAGGAGACACGTCTGTGGGAATGCG  
TAGATTCCGCCTCGGAAGAGAGCTAGCGCAACACTAAGAAAAGCAGGCTTCTGTTTATTCTCAGGACCTTTTTG  
TAACAGGGCTACATTCTGCAAAGTCTTACAAAGGAAGACTATACGTCTTAACAAATTATTTAGCCACTGAGTCC  
TCCCGATTTCGGACCTGTTTTAGTAATGGCAGAAGAATCCCTGAGCAGGTTACAGGTGCCCTAGATGACTAGGGTGC  
TGAGCTCTGGCGCCTTCTGTCCCACTCTTGCCTCCCCGCCCTTCCCTGAGCCACCCAGCAAGTGGGTGTCT  
TTTCTCCTGGGCCTGGTGACCTCCACAGGATGAGTGACTTTGTTCATAAAGGGTGGGGATCACCAGCCCCCTTG  
GTGGGGGACGGCTTCATATACCTCTTCCCTCAGTAATGCAATGCGAGTTTTTGTGGTGGGGTTAAGGCCATAA  
CAAAGGATCTTAAACCATGCAGTGACGCAATTGAAATGGTATCCACAGATATAAATATTTCTTTTCCATTG  
CCGTGACACTATGTGTGATGGTAATATTTCTGAGAGTTTCAAGTTTTGACATATGATTTTATGCATTATCAAA  
AGTTACTGCTGCCTTGAATGAAAATGTTCTGTGAAATTTTTGCAAAGCTTTACTAGGTTTTTTTTTAATTGTG  
AAATTTTGTAAAGGCAGGAAATGGATTAAACGAGCATGCTAAATATATTTTCAAAAAGCAATAATTTTACAT  
GTACAGAAATTATCCTAACCTTTAATACGCGAGAGCAACAGTTTACTTAATACGGTAATGGACTAGTGCAGTT  
TTTGTAGACAGTGGGCTTCTGATACAAAGTCTGTTTAAACACAGACACACACACACAAACACACACACACAC  
CCTAAAGTGTGGGTTTCTGTTCTAATGATTTGTTGAATATTATTATATTATTATTATTATTATTATTATTG  
TTATTGTTATTAGTAATGTTTGGTCTGGATTCTACTTGTTACTGAGTTTAAATTACTTGACGGTTCAGGTTACT  
TTGCAACACTTTCAAACGATGCAATGTAAGTGGCTAGCTTATATATATATATATATATATATATATATATTTT  
TTTTTTTTTTTACTTATTTTTTCTGATATTCTTACACCAGATATGTACGAAATGATCTGTCTCTGTTGGTGTA  
TTAGGAATGTCCATGCAGATACAGTTAAACAAGTGAATTGACTGTTCTGTAAAGTTATTTTGGGCAAAGTTGCG  
GAGACACATTCTCTGTCCACCTAAGAAATCAGAAGACTCTTCTGTTGATTTATGTTTAAATCATTTCAGTAGTTT  
CCCCACAGTGATCATTTCTGCATTTTCTGGCTTTTGTCTTCTGGCTGAAAGTGAATGGTGACTGTTAGGAATGT  
CAGGGACTAGTGACCCAGTCTGTTTCTCTGTGTTTTAGTTATTAAAAAGAAATCTGTACCCAAAGTG



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**FIGURE 5084A**

AGACCATCCAAGAAGACAGTGCAGCCACCTCCGAGAGCCTGGATGTGATGGCGTCACAGAAGAGACCCCTCCCAGA  
GGCACGGATCCAAGTACCTGGCCACAGCAAGTACCATGGACCATGCCAGGCATGGCTTCCCTCCCAAGGCACAGAG  
ACACGGGCATCCTTGACTCCATCGGGCGCTTCTTTGGCGGTGACAGGGGTGCGCCCAAGCGGGGCTCTGGCAAGG  
TGAGCTCTGAGGAGTAGAGGAGTTTTAGTTTAAATGAAAAAGCAAAGGAGAAATCAGTAGGTGAACCTAGCCAT  
TAGAGGAAGAACTGGCACGTAGCCTCTTGCTGTCTAAGGTCTCGTTCCGTGCTGGAGAATGCATATGAGCCCAAG  
AGTGTGGGCTGAGTGGCTGCTTAGGACGTTTTCGTTTAACTACCCCCCTCTTTTCCCTCACAAGGGATGGTGGCC  
GGGGTGTGGCTCAGGAATGTAAGGACATGCTGAATTCTGGATCTCTAAGGGTGCCTGGACATGGGCGTTGCAGAA  
AGAGAGCCACATTCTCAGGGTCTCTGGTGGTGTGTGCTTGGCGACTTGATGACTGATGTTGCCTCTGCAGCCCAC  
ACGCTGGGGTTCAACACTGGGTATGCTCGTTTTTCTGGAGTCAGTGTCTAGCTTCATGTTGCTCTGCGAC  
AATCATAGGATTGAGGTGAGGAAGACTTTTTGAACAACTCCTCAATTTAAATCCGCTTGAGCAAACGTTCTCT  
GTGGTCTGAGAAGTGGAAGGGGGAGGGATAAATGAGTGTCTATGAATCAAAGCTTTATTATCTTGTGATTCCAT  
TAATTTGCATACAGAGTCTTAGAAGTTTTCTTTATTCAAAGCAAATGTGGATAAAAAATGTATTACAAAAA  
AACTCTGCTATGGGGTCCAGAGTCTAGGAGTGGTTCTGCAGTTGATTGTCAGTGGAGAACCTGTGGCTGCTGGT  
TCATCAAAGCGCTGGTCCCTGAGTGCCATTGAGATTGCAGATGCAGTATTTTACGTGATGTTTAGAGTGTGGT  
GGTTGTGTAATTTTGGAGAGAAAGATTTTTCCCAAAAAGTCCCTAGTTTATTGGGTGTTCTCACACAACCTG  
TAAGATGAAGCTGTTTTTCTGCTGTGTGCAGGGCTGATTCTGGAATTCAGAAGGCCCTGTGGGAGCGTAAAAG  
GCTTTTGAATAAAGTGTGGAACAGAGCGCCTCATTCTGATAACATGCAATCATAAAACCATAGGGCAACTTGGA  
GTTAAGGAGTTTCTAGAATTTGCTTTAGTCTCCAAGTCAATTTTATTGATCATGAAATTGTTGAAGAGAAAC  
ACAAATGTCAGTTTTACCTTTCTGTGGGCGTGAAGCACATCGAAGTTTACGGCAACTGTTAATCTCTACCA  
TCTGTCTGAGTTGAGATTTAGGTTGTGACACTTGGCGTACTTATTGTAAATGACATTTTGTGTGCTTAGAT  
ACTAATGGAATTCATATTCTGGCTAGTTCTTTTCACTGCAATTTGTAGACATGTTCTTTTCTTTGTAGCAGTCCCTC  
CCTCACCTGAAATGTTGGTGTCTAACCGATTTCTAATGCTAATTTCAACTGGAAGCACTTTTTCAAGCCAGC  
TATCAAACCACACCAGACATGTATGGATTGCGGTTGCCAATAAAGCGTTGCTATTATGTAAGCATCCCTCACGC  
ATACAGCATCACCAGTTTTGAAAGCTTGAATCTCTGCTTACTTCAAGGTACAGAAAAAATGTACTTAAA  
CTGTGCAGAAAAGATGAAATCACTGGATAATATGTATTATAAAATAAGCTTCATGTGAGTGACACTGGTTAAGT  
TGAAATAAATGGTGAAAGCATTGATATCAATCATTGTGACTTTATCTCAAACAATATTGACACACATAGATGT  
TTTTCTTCTTTATGGTAAGATTACAGCCTTTATTGTCTTAAATCTCTTATACTCTTCAATATTTTCAAAGAAAA  
CATTCTAGTCTCAGAAATAGTCCATCTCTTTGCAAAACAGGGCTGGCCAATTATCAAGGACCCATAAAATCAAA  
ACACTTTCAAATTTTAAAAATAAAATAATTTTACATGATTGCTTTAGGAATTTTGAAGTATCCATTCTTTT  
CACTATGGAGTGTGAATATAGAAGATTTTTAATGAACAGGCTTGCCCTTTGATGCCAAAGGCAAAAAATAATA  
ATAATAACATTTGCACGTGTGATCACAGAGCAGCTGTGAGGCATCCCGGGGAGCGCACGCAGTGGGGATGTGAT  
TGCTCCACTCAACTATTTATCACAAAGTGTGTAAACATGGGAGATGAAAGCTTAACTCTCTTACACCCAGCT  
ACAGACCCGCAATGGCCCTAAAAATCTGGGGTATTCAATTGGGTGGGCTGCCATGGAGGAATTTTGGTTTTGTTT  
TTATTTTATTTGTTGTTCTGTTTACAAATCAGGAGAGCCCTGTTTTATATGCTAGGAAGGTCTTTGGGATAG  
GCCGAAGAGGTGTGCAACGAGCAGTGAAGGCCCGGGCCCTGTCTCTCAGGACCACGGCGGCTGCCCCACACA  
CAGTTCTGCTTCTCCCTATCTAGAAGAGGTTTTCTTGGCAGATTCTGCCAGACTCTGAGTGGAGCCCCCAT  
GACCTATAAAAGGGGCTGTTTGTCTCTCCACCTCTCTGTGCTCTTCTCCCTCCCTTGAGGGCACATGGC  
CGCTGGTACCACATGTTGGAGCGGCGCCCGGAGCCCGGAATGCCCTAACAAACCCCATGCTTGTGTTGCTGG  
GAGCTGACATTCAAGAAAAGTGCAATTAATAATCCTTGAGAAGGCATATTCTTTTGAGAGCCGTAAATGAAAAGT  
GCATTACGGAGAACATGCTCCTTTGTTGTGAGAGGAAAGAAAGGACTGTTGTTGCCTTTTAAGGAACAGGTTTCC  
CAGTTCCCGGAATGTCAGGGTCACATGAGGAATGGGTGAGCACTTAGGGCCAAGATTGTCGTGTGCTTGGCCCG  
GCAGCTTCTCTAAGTGACCTCTCCAGCATCACTCTGTGCCAGTGCTCATATCTGAGGCCACTTGAGTGTACAG  
AGGCAGAGCCTGGAAACATTAGCTTTGGAAACCGTTTCTTCTTTTATGTGGAGGAAGTAAGGTTTACAAAGAC  
ACCTAAGCTGGACATGGTGATGTGCCACTTGGATAGTTCCCAAAGCAGAAAGCAGCCAGGACATCCAGTACCCC  
ACTTCTCCGTGCCGTGTACTTTTAGGGAGGTTTTCGAAAGCTAGCTTCTTACCGATGATTTTGTCTATTTTCTG  
TTTTATGTGAAAACCTTCATTTATAACCTGCTCTTCTCAGTGTCTTCTATTTCAGCATTTCAGTATGACTTCTATG  
CCTCTAATTGCGACTGTATGGAGAAGACTGTTTGTCAATTCAGTGCCGTGGGATATAATCAGTCCTGTAAATTCA  
TCAGAATGTTCTGTTGCCTGATTTTTTTTTCCATTGCATTTAATTTCAATTAACATATTTTAGTTCTACAGTAAC

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**FIGURE 5084B**

CTAATTCCTCATTGTTACCATGAGATCCTAATTCTGTAGCTGTGTTCTGTAATCCCATGGGGCATGTACCATTG  
GAGACACATGAAGGATACAGTAGACAGCACGGAAGGCAGCAGCAACACACAGGGGTGTCCTCCCTCCCCAGAGCC  
CAGTGTGCACACAGAACCAAATTCATCTCATTTCATCGTGAGCTTGTCATGGTAACTGATCCAGCCACTCAGTACC  
TCCATTGGATAAGAGATTTGGCCACAGATTCTTCTAGAGAAAATCCAAATGTGGAGGGTGCAATTTGTTTCTGCAC  
CCAAACAAATACCTTTTGAGATTTCTTATAGGCATTCTCTCGAAGTCTCATTACTCTGATCAGTTATTGATCGG  
AGGCTACCCTGGCTCAGTCACCAGCTGCTCACGTGCTCCTTCTGTGGTCTCAGGAGCTGCAGTTGTTGCTGTTGT  
ATGAATAGACGATAGTTAATTAGACTGGATGTGTCTGTACTGGCAGTGATTTTGCAACTTCCTCTGTATAAGCGA  
TACATTTGTAAATCATGGGAATGTATTTGATGGTAATTGCCTGTGGTGGTTGTATCATGATTTAATTTTATTATG  
AGCTTTTGGCTTTATATATTTTTCTGCCTTTTTATGCATTCATTAAACAGTTTAACAGAC

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**FIGURE 5085**

MGNHAGKRELNAEKASTNSETNRGESEKKRNLGELSRTTSEDNEVFGEADANQNNGTSSQDTAVTDSKRTADPKN  
AWQDAHPADPGSRPHLIRLFSRDAPGEGGQHLQRQAL

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**FIGURE 5086**

CCTGGATGTGATGGCGTCACAGAAGAGACCCTCCAGAGGCACGGATCCAAGTACCTGGCCACAGCAAGTACCAT  
GGACCATGCCAGGCATGGCTTCTCTCCCAAGGCACAGAGACACGGGCATCCTTGACTCCATCGGGCGCTTCTTTGG  
CGGTGACAGGGGTGCGCCCAAGCGGGGCTCTGGCAAGGTACCCTGGCTAAAGCCGGGCCGGAGCCCTCTGCCCTC  
TCATGCCCGCAGCCAGCCTGGGCTGTGCAACATGTACAAGGACTCACACCACCCGGCAAGAACTGCTCACTACGG  
CTCCCTGCCCCAGAAGTCACACGGCCGGACCCAAGATGAAAACCCCGTAGTCCACTTCTTCAAGAACATTGTGAC  
GCCTCGCACACCACCCCGTCGCGAGGGAAGGGGGCCGAAGGCCAGAGACCAGGATTGGCTACGGAGGCAGAGC  
GTCCGACTATAAATCGGCTCACAAGGGATTCAAGGGAGTCGATGCCAGGGCACGCTTCCAAAATTTTAAAGCT  
GGGAGGAAGAGATAGTCGCTCTGGATCACCCATGGCTAGACGCTGAAAACCCACCTGGTTCGGGAATCCTGTCT  
CAGCTTCTTAATATAACTGCCTTAAACTTTAATCCCACTTGCCCTGTACCTAATTAGAGCAGATGACCCCTC  
CCCTAATGCCTGCGGAGTTGTGCACGTAGTAGGGTCAGGCCACGGCAGCCTACCGGCAATTTCCGGCCAACAGTT  
AAATGAGAACATGAAAACAGAAAACGGTTAAACTGTCCCTTTCTGTGTGAAGATCACGTTCTTCCCCGCAAT  
GTGCCCCCAGACGCACGTGGGTCTTCAGGGGGCCAGGTGCACAGACGTCCCTCCACGTTACCCCTCCACCCTTG  
GACTTTCTTTTCGCCGTGGCTGCGGCACCCTTGCGCTTTTGCTGGTCACTGCCATGGAGGCACACAGCTGCAGAG  
ACAGAGAGGACGTGGGCGGCAGAGAGGACTGTTGACATCCAAGCTTCCTTTGTTTTTTTTTCTGTCTCTCTC  
ACCTCCTAAAGTAGACTTCATTTTCTAACAGGATTAGACAGTCAAGGAGTGGCTTACTACATGTGGGAGCTTT  
TGGTATGTGACATGCGGGCTGGGCAGCTGTTAGAGTCCAACGTGGGGCAGCACAGAGAGGGGGCCACCTCCCCAG  
GCCGTGGCTGCCACACACCCCAATTAGCTG

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**FIGURE 5087**

MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSIGRFFGGDRGAPKRGSGKVPWLKPGRSPLPSHAR  
SQPGLCNMYKDSHHPARTAHYGSLPQKSHGRTQDENPVVHFFKNIVTPRTPPPSQGKGAEGQRPFGFGYGGGRADY  
KSAHKGFKGVDAAQGTLSKIFKLGGDRDSRSGSPMARR

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**FIGURE 5088**

GGCGCCTGAGCGGACTGACGCCGAGACGCGCGGGGTACGCGGCGCGGGGACGCGGGGCGCTGGGCGCGGGGCTG  
GGGGCGCAGGCCCGGAGGCCGAGGAGCGCGCGGAGCGGCGATGAGCAGGCGGCCGGTGGCCCCGCGGGGCGCGGA  
GCCCCGTGACAGCCTCGGCCAGGCGGGCGCTGCGATGGAGGCCGAGGGCCTGGACTGGCTCCTGGTGCCACTGCAC  
CAGCTGGTGCTCTGGGGCGCGGCCGCGCCATGGTCTTCGAGGGGGTGGTGCCCTACGTCCCGCAGTATCGGGAC  
ATTGCGAGGACGACAGAACGCCGACGGCTTCTCCACCTACGTGTGCCTGGTGCTGGTGCCCAACATTTTGGCG  
ATACTCTTCTGGTTTGGGAAGGCGCTTTGAGTCCCCGCTGCTGTGGCAGAGCGCCATCATGATCCTGACCATGCTG  
CTGATGCTGAAGCTGTGCACCGAGGTCCGTGTGGCCAACGAGCTCAACGCCAGGCGCGCTCCTTTACAGCTGCA  
GATAGCAAGGATGAAGAAGTCAAGGTTGCCCCAGGCGGTCTTCTGGACTTCGACCCCCACCACCTTCTGGCAG  
TGGAGCAGCTTCTCGGACTACGTGCAGTGCCTGCGCTTACCGGGCGTGCGGGCTACATCACCTACCTGTCC  
ATTGACTCCGCCCTGTTTGTGGAGACCCTGGGCTTCTGGCTGTGCTGACCGAAGCCATGCTGGGTGTGCCCCAG  
CTTTACCGCAACCACCGCCACCACTCCACGGAGGGCATGAGCATCAAGATGGTGCTCATGTGGACCAGTGGTGAC  
GCCTTCAAGACGGCCTACTTCTGCTGAAGGGTGCCCCCTGTCAGTTCTCCGTGTGCGGCTGCTGCAGGTGCTG  
GTGGACTGGCCATCCTGGGGCAGGCCTACGCCTTCCGCCGCCACCCCCAGAAGCCGGCGCCCCACGCCGTGCAC  
CCCCTGGCACCAAGGCCCTCTGACAGTGGGGAGGACGAGGATGTGGGACCGCCAGCCGCGGGCACTGGTGGGCC  
CTGACCTCCCCGCGGGGAGGTGGGTGCTGTGGCCCCTGCAGGTGTGGCAGAGATGGGGCATGGGCATTGGGGTC  
TCCATCAGCCTCTGTGGGGTGTCTCAGGGTGGGCAGTGGGGTGGGGCTGGGACGCTGTTTGTGCTCAGCGGGGA  
CAGCCAGGGTTGATCTGGCCCCGAGGGTTTTGGATGTTTTTAGGATGACATAAAAAGCAAGTGTTCCTCCATTT  
CCTCTTATGAAACACCGTCTGAGCCCAAGGTACACATTGGGCGGCTGCAGGAACCTGCTCCAGGTGGACACACG  
GGCCAGCAGCCGCGAACCTTGAAGCTGGGGTGACCGCAGGAGACCCTGTAAGGCCCTGTGAGCGGAGCCCTCGACC  
CCGTGACACCCTGGCCAGACACCCTGCTTGGACTGGGGTGGCCTCTGCTACCCAGGGGTCTGGCACGGGGGAGGG  
CTGGGGCTTTCTCTGCCTGGTACACACGGAAGGCGGCTGTGCGGACGACGGGTACCGTGCTCCGGGTTTTCTG  
ACAGTCGGTGTTCCTGGGCCTTTGGAGTGGCTGCGAGGCCTGAACGCCTTGTGGATCCGCTGTGTCCAGCCCGG  
CTGAGCATCGCCAGGGCTAGCTCATGTGCTCTTGTGAGCCTCTGGTTCTCCTCGAGTCTTGGGGACGTGGCAG  
ATGCCAGCGACCATCAGACAACGTGGAGGCCCTCATGGCAATGGCTGAGGGGGCCGGGCTGAGGCTGTGCACAT  
GCAGTCTGCACGCCACTCTTGGGCTCTGCTGGCGGAGATCCCCCTTCTTCTGGGTGCAGACTGCACCTCCGGATG  
CAGTTTTGATGTCCATCTTCCAGGAGAGACGGTCTCGGGTCCAGGGAGTGGAGGGGGCTGCCCCTGCCGTGCAGG  
TCCTGGCCGATGGCGCCTTACCCTGCTGCCCTGGGCTTTTGGCCTGAAGCAAATTCCTGAGTGGGGGTACTGGG  
GCCTGCCGATCCTGTCTGTCCACTGCCCCACCCCGTGTGCTGGCTCCCTCACTTCTGGCTGCAGTGGGAGCCG  
CCAGTCTGACCTTGTACCCGACGCTCTGCCCCACCCCGTTGCAAGAGGTCAACCATGTGAGCAGCCTTGCA  
CTGACCGCAGCCGGCCCCAGGCCTCAGAGTTCTGGATGCTTCCGTGCGGCTCCAACAGGCATCGTCTTCCCTTC  
CGCAGGTGGAGGGGCCGCTTCCCGCAGGCATCTGAGCTCTGTGCCGGGGCCGTGGCCATGGGAAGATGTTCCACG  
CTGCCTCCTCTCGAGTTTTCTCGGAAACACTCTGAATGTCTGAGTGAGGGTCTGCTTAGCTCTTTGGCCTG  
TGAGATGCTTTGAAAATTTTTATTTTTTAAGATGAAGCAAGATGTCTGTAGCGGTAATTGCCTCACATTAAACT  
GTGCGCGACTGCAGGCGCAGTGACTGCTGAATGTACCCTGTGTGGCGACTTGGAATCAATAAACCATTTGTGGAT  
CCTG

CTGGGTTTGTGTCGCCCGGTTAGGCGCTGCGCTCTGAGCGACGCGAGGCCCGCTACCGACGCCCGCCGCCCTT  
TGTCCCGTAGTGGAGGTGCGAGCGCGGGTTCGCGTTCTCTGCGCAGGGGCGCCCCGACGGCGGCTGTGGCCGAGGTGC  
GCTGCCCGGGGCGCCGCGCCGCTGCGCCTGCTGGAGTTGGAGGGTGGCGCGGGGCGCGGCCGTGCGCATCGGCTCGG  
TGCTGGCCGTGTTTCGAGGCCGCCGCTCCGCGCAGTCTCTCGGGGCCCTCTCAGTCCCGTGTAGCCTCCGGGGGT  
GCGTGCGCCCCGCGCGGCCGGAACGCAGGCTGAGGTCGGAGCGCGCGGGCGTGGTGCGGGAGCTGTGCGCGCAGC  
CGGGCCAGGTGGTTCGCCCCAGGAGCGGTTCTGGTGAGGTTGGAAGGATGCAGCCACCCGGTTGTTCATGAAAGGCC  
TGTGTGCTGAATGTGGCCAAGACCTCACCCAGTTGCAGAGTAAGAACGGGAAGCAGCAGGTGCCGCTGTCCACGG  
CGACCGTGTCCATGGTGCACAGCGTGCCGGAGTTGATGGTGAGCTCCGAGCAAGCTGAACAGCTGGGAAGAGAAG  
ACCAGCAGCGACTGCACCGAAACCGGAAGCTGGTGTCTATGGTGGACTTGGACCAGACGTTGATTACACAACCC  
AGCAGCACTGTCAGCAGATGTGCAATAAAGGCACTTTCACTTCCAGCTGGGCGGGGTGAGCCCATGCTGCACA  
CGCGCTGCGTCCACACTGCAAGGACTTCTTGAGAGAATCGCCAAGCTGTACGAGCTGCACGTCTTCACTTCG  
GCAGCCGGCTGTACGCACACACCATPCGAGGCTTTTTAGACCCGAGAAGAAGCTTTTTTCTACCGAATATTAT  
CAAGGGATGAATGTATTGACCCATTTTCTAAACGGGAAACCTTAGAAATCTCTTCTTGTGGAGACTCAATGG  
TTTGCAATTATTGATGATCGAGAAGATGCTTGGAAGTTGCCCCCAATCTGATAACTGTGAAGAAATATGTATACT  
TCCAGGGCACGGGTGATATGAATGCGCCCCCTGGGTCCCGAGAATCTCAGACGAGAAAGAAAGTAAATCATTCTC  
GAGGCACTGAGGTCTCAGAGCCATCTCCGCCCCGTGAGAGACCTGAGGGGGTAACGCAGGCCCTTGGAGTGGAGC  
CCAGCAATGGCCTGGAGAAGCCTGCACGGGAGCTGAACGCGCAGCGAGGCCGCCACCCCGCGGGACTCACCCCGCC  
CCGGGAAGCCAGACGAGAGGGACATCTGCCCCCTGCCAGGCCCCACCAGCAGCCAAGAGCTGGCAGGGCGCTC  
CTGAGCCCCAGGGATCCTGTGCGCAGGTTGGCCGGGTGGCACCGGGACAGCGGCCTGCCAGGGTGGCACGGGCA  
CTGACCTGGACTTTGACTTATCCAGCGCAGCGAGAGCAGCAGTGAGTCCGAGGGGCACGAAGTCTCTCTCTCCG  
CCTCTGATGGCGAAAGCGAGGGGAAAAGAGGCCGGCAGAAGCCGAAGGCTGCCCCAGAGGGAGCCGGGGCGCTGG  
CACAGGGCAGTTCCCTGGAGCCGGGGCGGCCTGCAGCACCGAGTCTCCCCGAGAGGGCCGAGCCTGGCGCGCATG  
CCCCGGACAAGGAGCCTGAGCTGGGTGGGCAGGAGGAGGGCGAGCGGGATGGCCTCTGCGGCTGGGCAACGGCT  
GTGCCGACAGGAAGGAGGCGGAGACCGAGTACAGAACAGCGAGCTGTGGGGGTCACTGCGGGTGAGTCCCTGG  
ACCAGAGCATGGAGGAGGAGGAGGAGGAGGACACGGATGAGGATGACCACCTCATCTACCTGGAGGAGATCCTGG  
TCCGTGTACACACTGACTACTATGCCAAGTATGACCGCTACCTCAACAAGGAGATCGAGGAGGCGCCGGACATCC  
GCAAGATCGTGCCGGAGCTCAAGAGCAAGGTGCTGGCAGACGTGGCCATAATTTTCACTGGGTACACCCGACAA  
ACTTCCCGATAGAGAAGACGCGGGAGCATTACCACGCCACGGCGCTGGGAGCGAAGATCCTCACTCGGCTGGTGC  
TGAGCCCCGACGCCCTGACAGGGCCACGCACCTGATCGCCGCGCGAGCTGGCACAGAGAAGGTGCTGCAGGCAC  
AGGAGTGCGGACACCTGCACGTGGTCAACCCTGACTGGCTGTGGAGCTGCCCTGGAGCCTGGGACAAGGTGGAGG  
AGCAGCTCTTCCCGCTCAGGGACGATCACACCAAGGCACAGAGGGAGAAGCCCTGCGGCCCTTCCCGACCGGG  
AGGGTGTGCCCCCACCGCCTTGTTCCACCCGATGCGGGTTCTTCCCAAGGCCACGCTGGCCCCGAGGTTCCGGA  
TCTACGACTCCAACAGGGGAAGCTCATCAGGACGCGCGCCCGGGGGCCCCAGCACCTCCAGCTCCCTACCCA  
TCCGCCAGGAGCCCTCTCTCTCAGAGCGGTTCCGCCACCCGAGCCGAGATGTTTGGTGAAGAGCTGCCTGACG  
CTCAGGACGGAGAGCAGCCTGGCCCTTTAGAAAGAAAGCGACAGCCAGTATGTCTGAGACAATGCCGCTGTACA  
ATCTTTGTAAGGAGGATTTAGAGAGTATGACACAAAGAGGTGGACGACATCCTTGGAGAAGGCAGCGACGACAGCG  
ACAGCGAGAAGAGGAGGCTTGGAGGAGGAGGAGGAGGCCAGCCCCGGAAGCCAGGACCCGAGGGAGCGGA  
CGCTCGGGGCACCTGCGTCCAGCGAGAGGAGCGCGGAGGGGGCCGGGGGCCAGAGGCCACAAGAGGAAGCTGA  
ATGAAGAGGACGCCGCCAGCGAGTCCAGCAGGGAGTCCAGCAACGAGGATGAGGGCAGCAGCTCCGAGGCCGACG  
AGATGGCCAAGGCGCTGGAGGCGGAGCTCAACGACCTCATGTGAGCGCGGGCAGCGGGCAGGACTGAAGCCTGA  
CCGACCTCCAGCAGCACTCGGACGTCCCCGGACAGCCCTCAGTCTCGGTCCACGCTGCTTTCTTCCCAAGGAC  
ATGTATATTTGCAGAGCTCCACATACAGAAACACATTATTTTGCAGAAATAGGTGTTTTTAAGAAGTTTTACTAC  
AGGAATGTCTACTTTTGTAAAGTGACAGGTGTTAAAGGCCAGGTGTGCTGTGCCAAAGAGCTCAGCAGAGGCTCA  
CGTGGCCCAGGCTGGTTCGCCCCGCTGTCTCGGTAAGGGGCGGGTGGTGTGTTTTCCCTTGTGTACAGAGCAC  
ATTCTTAGGGGACGGCTTTGGGGGTCCCACGAGACATGGACTAGGAGTTTAAGCAGGACAGTGTGCGTGCACGA  
GCTCCGAGCCAGCACAGACATGCCTGGAACCCCCGCGCCTGCTGCTCCCTCCTAGGGAACCCATTTCGGGGGA  
ACGCCGTGACTGTGGGCGAGCCTGGAGCTTCTGCAGCCTCCTACGCAGGTCCACGCCACGTGGCCTGGGCTGC  
CATCTGCCGTCCTCCCACTGGCATCTGGCAAGGGGGCGTTGCTTTTCTGGGCGGCCTTTTATGTCTTGGAGA

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**FIGURE 5089B**

CACCTGATGTAAAGTTTCTGTAAATCTATTTCATATCTGACCCACCAAACAGATTTCCTTTAATAAAAAATCCTT  
TTTGTAAGTTC



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## FIGURE 5090A

CACCCCTCCATCACCCAGCCTGAACTCTACCCATTGAACACGAGCTGCCCAACTCCGCCTTGCTTCCCCATTC  
CTGGCGACCCTGCTTCTGTCTCTGTGAATTTTACTATTCTAGGCACTTCACAAAAGTGGACTCATACGATATC  
TGAGTTTTTGGCTTGCTTCTCTATTGAATTTCTAAAGGGGGTGGGAACTAAGCAGATCACAAGGGAGCTGCC  
CACAGAGGTAAAGACAAGGTCAGGTAGGCTGAGAGACGAGGAAAGCGGGTCAAGGCGTAGGGCTGGAGGGCAGG  
GGCGGGCCCTGGGCGTGGGCTGGGGTCTGCCCCGGGGCGACCCCGGGCGAGGGCTGCCCGGAGGAGCCGAGG  
TTGGCGGACAGCTTGCCCTGAGCTTGAGGGGAAGGCAGCGATGGGACAAAGGACGGAGGTCTAGGAAGAGGGTC  
TGCAGAGCAGAAAGCACGGGTAGGGGCGGCTGACGCTCGGAAGACAACGCATGGGAGCCGTGTGCACGTGGGA  
GCTCGGAGTGAGCGTGAGTTCCGTGCCAGGCCCGGACTCGGCCCGACAGGACAGCGCTCCGGGTGCACGGGGT  
CCTGGAGCCGCGCTCGGGGAGGGCGCAGCGAGGGCGAGCGGCGGCGTTAGGACCCGGAGGCGGGGCGGACTGG  
GGGCGGCGGGGCTAGGACCCAGCGGCTCCGGCAGAGCGGAAGCGGGCGGGGAGCTTCCGGGAGGGCGGCTCGCA  
GGCACCATGACTCCTGTGAGGATGCAGCACTCCCTGGCAGGTGAGACCTATGCCGTGCCCTTCATCCAGCCAGAC  
CTGCGGCGAGAGGAGGCCGTCCAGCAGATGGCGGATGCCCTGCAGTACCTGCAGAAGGTCTCTGGAGACATCTTC  
AGCAGGTGGGTGCTGCCACTCACCCCACTGATGAGAGGGCCATCCCTGTCCTGGGCAATCCAGCAACACACC  
CTCTGGGAGCAGCCCCCTTGGGGAATCCCGGTCTGGGGAACCCATCTGGCTTCCCTGTGTGGGAGGGGCTGAAG  
TGAGAGCCCAACTTGGAAGCTTTTACTCCTGGGAGTCCAAGAGCTCACTCCCTTCCACCCCACTTAGCCTCCTGG  
TTTCTGTGGTGGCTCTGCTCTCACAACCTATGCTTTTCTCCATTGGAGGGCTATTCTTCACGTTTCTCTG  
CAGCCAACAAATATTTACCCAGCAGTGTCTGTGTCAAGGCAGTGTGGGAATCTCTATATATCCAGCCACGGATA  
AGGCAACATACCTCTCCACTGGAGCGCACATTCTGGCAGGAGAGAAAGACCTAAATTAAGCAATAGATGATTAGT  
TCTTCAATAACAGTTGTGACAAGGTCTATTGATAATATTTTGAATCACTAATATTCATATAAACCGTGCACAAC  
CATTGATTGAGTGCATTAACTCACACTTCATGAGCAGGCACTGCCGTCTCTCATTTTATAGATGAGGAACTG  
AGGCACAGAAGGGCTGAGAGACCTGGCCTAGTGACAGAGCCAGGATTCAAAGCCATAGATCATGGCCCCGGGTTA  
TGTAGGTTATTACTGCATCTGTTTCAAGGGAGATGGGGTACTGTGAGGCTCGTCATGGGAAGCCTGGCTTGGTCTC  
AGGTCAAGGAAGGCAGAGCTGAGGAAATGACATTTATGGTAAAGTCTGAGGGTTGAGTGGGTAGGTTGGGAAGAA  
CATTCCAGAAAGAAGCACATGAACCTACAGCCTGGAGGTGGAGGACCTAAAGGAAGCCAGCATGGCTGGAGCAGC  
GAGTGGCCATTGAGGGAGGCGAGCTGGAGGGCTGCAGCTTCTGTATTGGCAGTCTGACCTCGCACAGTCTTTG  
GGCTCCAGTGACTTCACTCAGTGTTTATCTAACATGAGTGAGTGAATGGTGTGCTCTTTTTTGGTAAAGGTC  
CCAGGGGTTGTGGGTACACAGGTCTGTCTTTGGCCATAAGCAAACCTGAAATGAGGCTTGGTCTCCTTCCAGG  
ATCCACACCATGCCTCACATGGTAGACCCAGTGGGAAGTATGTGACTGCCTGACTCAGGTGCCCTCTCGTGGTC  
CAAGCCATCCCTGCCCTGTCCCTTCCCTGGTGTGCGCCAGACCTGGAGCCCCCTGCTCCTTCACTTTGAGCCTCC  
TCTTCTGTACCAACTGGGAACCCACCTCTTCTGAAAGTCTCCCCCACTGACTCACCGGCTTGCCCCGAGTTT  
GTCAAGAAATGTCCAGTAACAGGGGACACACAGTGAAGTGACTGAGGGGTTACCTTGGAGTTGATGCCCTTGGCT  
CAGATCCAGCTCCCCTGTTTTCTTCTGTGAACCTTGGGCAACCCAACCCCTCTAAGCCTCGGTGTTCTCATTT  
GTGAAGTTGTGGTAATAATGGTAGCTTCCCTGGTAGAATTATTTTAAATATTAAATTAATCAAACATGCAAAGGA  
ATGGAACAGTGCCTGGCACTTAGGAAGCCTTCAGGAATGCTATCTCTTCCCTGTTGATAATCTTGACCCGTACA  
CTGCCCTTGGTTGCCATTCTAAACCTGCCACCAATAGTAACAAAGTGTGGATGCACCTTTTGTGCTTATCTTT  
GTGCTAAATGTGCCGAGGGACACCTAGGGAAGAGGATGCAGGTCTTTAAGAGCCATCAGCTCCAGATTATGGCC  
ACCCCATGTCCAGCACTTAGAATGGAGGCCAAACCACTTCCCTCGGAAATTGTGTTTCTTGGCAAGATGGGGAC  
TGCGTGGTTGCCCTTCTCTGAGGGCAGCGCTGGATTTTTGGCGTCTTTCTTCTCTGCTGCTGGTACTTGGCACCT  
TGTAGACAGTTGCATGTCCCTGCCAGGGATGGGATGAGGAGAGGGCAGGAAGGCATTTCTGGGTAGTGGAGT  
GCTGCGTTCAATTGAGTGTGGGTCTCTCAAGCTGCTGGCACAGCGCAGGGAGGGCCAGATGCCTCTCAGGAGCCTT  
GGGCTGAGTCTGGCTCCCTCACTCCTGGGTCCAGGTCACTGCATCTGTCTCTCCACCATGTGCTCCACCTCG  
TGCTGGACCTTAAGAGATACCAATTATGTGGTGCCACTGTGTCTAGAGGCTGGAATGGGAACACATAGGGCGA  
GATTGATTGTTAATTGCTAGCATGAACCGCGTGGGCTTCTCAGGGTCTAGAGTGGAGAGAAATCGGTAAGAATTG  
GTGGCACGCTGTGAGAACTCCCGAGACCAAGCTAAGCAAAATTAACCAATCAGTAGAGCAGCCTTCGGAGTAA  
GGGCTAAATGATGTCTCTAGGGCCTGGTTTTGCTTTTCTTCCATGTCAGTTTGCTTCTTGGGTCTGGCTGCAT  
TCCAGACAGGCCATGCTCTCTGGTAGCAAGGTGACATGACACAGGGTCAGGTCCAGCAGGAAAGAAATGCTGTC  
CTGTGTCCCACTTCTCCAGAGCCACACTCACTCATCCACCTGGCTTGGTCCCTCATGTCTATCCAGAAATCC  
ATTAATGGGGCCAGGGGACTATGACACACCACTTGGCTTAGACTGAGGAGCTCTGTGGGCAGCCCCACCTGAAGC

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**FIGURE 5090B**

TC TGGGACTAAGCCTGCGAGAGAGATGGATTCCCCAAGGGAAATGGGGCCATTGCTTGAGTAAAAAGGAAATAGT  
TGCTGAAGAGGAAAACCACGTGCTTACTCCACATAGGGCAGACTCCTGGAAGAGGGGGGCAGGGTAGGGAGGTGG  
ATATGCAGGTTGCCCTGGCAGGGTCTGGAAATGGGGGCTGCAGGCTTGAGGGGAGGCCTCAGTGTGGCTTGGAAC  
GTGGTGTATGGTGGTCTGCCGGAAGGCCGGCCTGCACAGGGGTGGGAGGGGGGTGCTTCTGCATGGGAAGCACA  
GACAGCGCTGCCTCTCCCTTGCACTCAGCTCTCGGGCATGAGAGGCTAACTTTCCGTGAGCCTGTGGGCCAGGC  
CTCTTTGAATGGGGCTGAGGGAGCTTTGCCCTGGTTCTTTGTGTCCCCACGGTGCCACGGGAGGCTCCCTGGCA  
GGGTGTGGGGCAGGGCAGTGAGTGAAGAGTTGGGATGAGTGAGTTAGGGCCCACGGATTACTCAAGACAGGACTT  
CAAGTTGATTCAAGCGTGTTAGGGAGCTGTGATTGGATTTTGAGCAGGGCAGGGATGGGACAGAAGAGTTTGGGG  
AAGGTTCCCTCAGGCATCCGTCACAGAAGGGACAAGAAGGGAGAGAGAGTGGATGCCAGGGACACCCAGAAGCTGT  
TATTGTAGTCAGGATACGACAGGGGTGAGGCTACAGACAGGGGACTTGCAAGCAGGGAGGGCAGGGTGAGACATT  
CAGAGGAAACGACGACAGGAAATGGTGACAGATAGGGAACGAGGATGAAGGGAAGGGAGAGCCAGTGACGACTGG  
CAGTGGAGTGGGGAGCACCGCCACCTCTCCTCCTCCACTTGCCCCCTCCTGTGGCACTGGACAAGCTAGTGGGCTT  
TTCGTTGTCCATGGGCTTTTTTCGGTGGGGATGTGAACAGCTTTGAACCCGTCCCCTTAAACATGCTCCTCCTGCA  
CGGAAGAGACAGGGGCAGGGGAGAGACTCTCTCCCCACCACCCGGCTCAGGCCCCAGCACAGCCCGGCTCTGGC  
CTCACTGGCGTCTGTGCCCAGTGACGCAGGCAGGTGAGCTCCTGGCAAATTAGCATTGCAGGCTGTGCTCTCTCC  
TCCTGCTCTGCTGCAGCTGGGAGTGTGCAGAGACTGGAGGGGATGACAGTCACCCCTCTGTTTTCTGTGGTGGCTC  
TGTTTTCTGTGGTGTGCTGGATGCACCTCTGTTTTCTGTGGTGGCTCCAAGAGAGTGCACGGTCCCTGCTGATTGAA  
AGAAGGATGAAGGGCAGAAGAGGGGCGGGGAGCTGTGTGCCCTAAGATCTCATTGCCTTTTTATGCCGATTAAACA  
TGCTTTTAGCCCTACTGAGCTTATAGTTAACAGAAGTTTCCAGGCTTTTCTTCACCTGAAGTGTGTCTAAAGCA  
AGTTCCCTCCACCTTCTGTATTATACGCTTGATTTTTAAACCTAAATGTTGGGCTTCACATTTGTTCTTGTGA  
AATTCATCTTGGTGATTGCAGTCTACCCTCTGGCC

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**FIGURE 5091**

MRGPSLSWAIPATHPLGAAPLGNGPGGPIWLPCVGGAEVRAQLGSFYSWESKSSLPSTPLSLLVSCGGSALTTH  
AFPPIGGPIPSRFPAAANKYLPSSARVQGSVGISIIYPATDKATYLTWSAHSGRRERPK

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**FIGURE 5092**

AGATGATGATTATTCCCCACCTTCTAAGAGACAAAGACCAACGAGCCGCCACAGCCACCAGTCCCAGAACCCGCC  
AATGCTGGGGAACGGAATGAGGGAGTTCAACTCTGGCCCTCACAATCCAGTGGAGGAGACGCAACTCATCTGC  
CTCTGTCCCTCTGGGCACGCCCTCGTGCCAGGTGCATCTGTGGACAGGGGCCATGCTCCTGGGCTTCCAAAGTTGG  
AGAAAGCTGCCAGGCTCAGGTCTGAAGGCCAGAATTCTACAGTAAGTCCTACTGAGTCAAGGTGGGAGCAGGGTC  
GGTAGCTTCCGAGGCTCTGCGGGAGAATCTGTTTCTGGCCGTAGAGGTGGCCTGCACCTCCTCAGCCTGTGCTGC  
CCGTCTCGAATGACTGGAGTTTCTGCTTCTGTCACTACACCTCCACCCCTCTCCATCACCTGCTCTGCTCTTAC  
AAGGATCCGAAGAAATGGAATCATCGTATCGCTGATCTACGTAAACAACTGAAGAATTGTCTGAAAGAAAATAT  
GACATGAACCTTATGAATTCAATAGGTGAAGATTTACAACCTTGATAAATCAACTTTGTGACGCTCGAGCTGTAAAG  
CCAAAGGTCCGGTGATGATCCCATACCCCTTTTTTCCAGTCTCATGTTGAAGATTTTTATGTAGAAGGCCCTTCCCA  
AAGGAATTTTTTTTTTTTTTTTTTTTTTGTAGATGGAGTTTTCACTCTTATCGCCAGGCTGGGGTGCAATGGCAC  
AACCTTGCTGGTCACTGCAACCTCTGCCTCCTGGGTTCAAGAAATTCTCCTGCCTTAGCCTCCCAAGTCACTGGG  
ATTACAGGTGCCACCACCACACCAGGCTAATTTTTGTATTTTTAGTGGAGATGCGGTTTACCATGTTGGCCGG  
GCCAGTCTCGAAGTCTGACGTCAAGTGATCTTCCCGCTCGACTCCTGATATCAAGTGATCTTCCCGCTCGGC  
CTCCAGAGTGCTGAGATTACAGACGTGAACCCATGCCTGGCCAGGAATTTGTTTTTGTAGGAAGGCTTTCTACT  
AATGGAATTCCTGGCCTTGAGAGGATGTTACTTTAGAAGGAAAGGATTTTTTGTATTAAAGCTGGACCTACC  
ATGAAAGACTTCTGAATCCAGGAAGAGAACTGACTGGGCAACATGTTATTAGAAACAGGACCTTGCCCTGTCA  
CTCAGGATGGAGTTCACTGGTCTATCATGGCTCATTATAGCCTCAAACCTCCAGGCTCAAGCAATCCTACCATG  
TCAGCCTTCCAGTAGCTGGAACCTACAGATACCGGCTCTCACACTGTCACCCAGGCTGGAGTACAGTGGCACAAC  
CTCTGCTCACTGCAGCCTCCACCTGCCAGGCTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGTGATTT  
CCAGGAAGTGCGCTCACAATGACTCAAGCTGCCACATACTGTTGATTGTGAAATGCCAGTTGAAGCATATGCTCT  
GCAAGCTTAGGGGTGCTACAAGTTGACCACTGCAGCAGTAAAGATGACTCTGAAGAACGGCGTGGGATGTTCTCT  
TTCAAATGCACTTGAGCAGCGGTCTCCAACCACAGGGCCACAGAGCTGGAGCTGGATCTACCATGAAAGACTTGT  
GAATCCAGGAAGAGAGACTGACTGGGCAACATGTTATTCAGAATCTCCTGTGCCATCCAGGCTGGAGTGCAGTG  
ATGTGATCATAGCTCACTATAGCTTTGGCCTTCTGAGATCAAGCAATCCTCCCATCTCAACCTCCCAAGTAGCTA  
GGACTACACACGCATGCCACCCATGCCAGATCATTTTGTAGAGTCAGAGTTTACCCTGGTGGCCAGGTTGGC  
CATGTTGGCCAGATGGGGTCTTCTTTTGTGGCCAGGCTGGCCACAAATCCTGGGCTCAAGTGATCCTCCACC  
TCGTCTTGTAGAGATGAGATTTAGTTATGTCGTCCAGGCTGATCTCAAACCTCCTGGGCTAAATCGATTGTCTCA  
CCTCAGCCTCTCAAGTATGTTATGAAGGTTATATGTTAGGAAGGGTCCCAGGAGGTAAACCCACACAGATGGGAT  
TTGGGCATAGGTTTGGTTTCCAGGGGGCAGTGCTGAGCTCTTGGCAGTGGGAAATGGGATGCTGGTGATTTCC  
AGTAGGTGACCTCACAGTCAAGCTACCACTTACTGTTGATTGTGACGAAATGCCAGCTGAGGCACATGCCCT  
TGGGAGCTAAGTGGTTGCTGCCCTTGACCACTGTGAAGACTGGTGTGGGAAGGGTCGTTTTGGATGCACTTGAGC  
AGGGGTCCCCAACCCCTGAGCCATGGAGCCGCAAGGAGCCACACAGCAGGAGGTGGGAACATCCAGTTGCAGGAA  
AACAAGCTTAACACGCCCCTGATTCTACATTATGCTCTACCTCCCGGCAGCCTCTCCAGGCCCAGAACTTTCT  
CCAGTCAGCCTCTACAGACCAAGCTCATGACTCACAATGGCCTATTTAGGCCCATACCTACGTACAGGCAGCCT  
CCGCAGATGAGGCTACTGCCTCACAACAGCCTCCACAGGCACAGCTCCATCGTTACAATGGCCTCTTTAGACCCA  
GCTCCTGCCTCCAGCCTTCTCTCCAGGCCCTGAACTTTCTCAAGTC

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**FIGURE 5093**

GCGACGGGACGCGCTGGGACCGGCGTCGGGGGTGCGGGGGACCATGCGAGCGGAGGTGGGTCTTCGTGCTGCTCGA  
CGTGCTGTGCTTACTGGTCGCCTCCCTGCCCTTCGCTATCCTGACGCTGGTGAACGCCCCGTACAAGCGAGGATT  
TACTGCGGGGATGACTCCATCCGGTACCCCTACCGTCCAGATACCATCACCCACGGGCTCATGGCTGGGGTCAC  
CATCACGGCCACCGTCATCCTTGTCTCGGCCGGGAAGCCTACCTGGTGTACACAGACCGGCTCTATTCTCGCTC  
GGACTTCAACAACACTACGTGGCTGCTGTATACAAGGTGCTGGGGACCTTCCTGTTTGGGGCTGCCGTGAGCCAGTC  
TCTGACAGACCTGGCCAAGTACATGATTGGGCGTCTGAGGCCCAACTTCCTAGCCGTCTGCGACCCCGACTGGAG  
CCGGGTCAACTGCTCGGTCTATGTGCAGCTGGAGAAGGTGTGCAGGGGAAACCCTGCTGATGTCACCGAGGCCAG  
GTTGTCTTTCTACTCGGGACACTCTTCCTTTGGGATGTACTGCAIGGTGTTCTTGGCGCTGTATGTGCAGGCACG  
ACTCTGTTGGAAGTGGGCACGGCTGCTGCGACCCACAGTCCAGTTCTTCCTGGTGGCCTTTGCCCTCTACGTGGG  
CTACACCCCGGTGTCTGATTACAAACACCACTGGAGCGATGTCTTGTGGCCTCCTGCAGGGGGCACTGGTGGC  
TGCCCTCACTGTCTGCTACATCTCAGACTTCTTCAAAGCCCGACCCCAACAGCACTGTCTGAAGGAGGAGGAGCT  
GGAACGGAAGCCCAGCCTGTCACTGACGTTGACCCTGGGCGAGGCTGACCACAACCACTATGGATACCCGCACTC  
CTCCTCCTGAGGCCGGACCCCGCCAGGCAGGGAGCTGCTGTGAGTCCAGCTGATGCCACCCAGGTGGTCCCTC  
CAGCCTGGTTAGGCACTGAGGGTTCTGGACGGGCTCCAGGAACCTGGGCTGATGGGAGCAGTGAGCGGTTCCGC  
TGCCCCCTGCCCTGCACCTGGACCAGGAGTCTGGAGATGCCTGGGTAGCCCTCAGCATTGGAGGGGAACCTGTTT  
CCGTGCGTCCCCAAATATCCCTTCTTTTTATGGGGTTAAGGAAGGGACCGAGAGATCAGATAGTTGCTGTTTTG  
TAAATGTAATGTATATGTGGTTTTTAGTAAATAGGGCACCTGTTTCACAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5094**

MQRRWVFVLLDVLCLLVASLPFAILTLVNAPYKRGFYCGDDSI RYPYRPDTITHGLMAGVTITATVILVSAGEAY  
LVYTDRLYSRSDFN NYVAAVYKVLGTFLEGA AVSQSLDLAKYMIGRLRPNFLAVCDPDWSRVNCSVYVQLEKVC  
RGNPADVTEARLSFYSGHSSFGMYCMVFLALYVQARLCWKWARLLRPTVQFFLVAFALYVGYTRVSDYKHHWSDV  
LVGLLQ GALVAALTVCYISDFFKARPPQHCLKEEELERKPSLSLTTLGEADHNHYGYPHSSS

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**FIGURE 5095**

GCCGCGGGCGGGCGGGCAGCGGTTGGAGGTTGTAGGACCGGCGAGGAATAGGAATCATGGCGGCTGCGCTGTTC  
GTGCTGCTGGGATTTCGCGCTGCTGGGCACCCACGGAGCCTCCGGGGCTGCCGGCAGTCTTCACTACCGTAGAA  
GACCTTGGCTCCAAGATACTCCTCACCCTGCTCCTTGAATGACAGCGCCACAGAGGTCACAGGGCACCGCTGGCTG  
AAGGGGGCGTGGTGTGAAGGAGGACGCGCTGCCCGGCCAGAAAACGGAGTTCAAGGTGGACTCCGACGACCAG  
TGGGGAGAGTACTCCTGCGCTTCTCTCCCGAGCCCATGGGCACGGCCAACATCCAGCTCCACGGGCTCCAGAA  
GTGAAGGCTGTGAAGTCGTGAGAACACATCAACGAGGGGGAGACGGCCATGCTGGTCTGCAAGTCAGAGTCCGTG  
CCACCTGTCACTGACTGGGCTGGTACAAGTCACTGACTCTGAGGACAAGGCCCTCATGAACGGCTCCGAGAGC  
AGGTTCTTCGTGAGTTCTTCGCAGGGCCGGTCAGAGCTACACATTGAGAACCTGAACATGGAGGCCGACCCCGGC  
CAGTACCGGTGCAACGGCACCCAGCTCCAAGGGCTCCGACCAGGCCATCATCACGCTCCGCGTGCGCAGCCACCTG  
GCCGCCCTCTGGCCCTTCCCTGGGCATCGTGGCTGAGGTGCTGGTGTGCTGGTCACCATCATCTTCACTACGAGAAG  
CGCCGGAAGCCCGAGGACGTCTGGATGATGACGACGCCGGCTCTGCACCCCTGAAGAGCAGCGGGCAGCACCAG  
AATGACAAAGGCAAGAACGTCCGCCAGAGGAACCTCTTCTGAGGCAGGTGGCCCGAGGACGCTCCCTGCTCCACG  
TCTGCGCCGCCCGGAGTCCACTCCCAGTGCTTGCAAGATTCCAAGTTCTCACCTCTTAAAGAAAACCCACCCC  
GTAGATTCCCATCATACACTTCTTCTTTTTTAAAAAAGTTGGGTTTTCTCCATTCAAGGATTCTGTTCTTAGGT  
TTTTTCTCTGAAAGTGTTTACGAGAGCCCGGAGCTGCTGCCCTGCGGCCCGCTGTGGCTTTCAGCCTCT  
GGGTCTGAGTCATGGCCGGGTGGGCGGCACAGCCTTCTCCACTGGCCGGAGTCAGTGCCAGGTCTTGCCCTTTG  
TGGAAGTACAGGTACACGAGGGGCCCCGTGCTGCTGTCTGAAGCCAATGCTGTCTGGTTGCGCCATTTT  
TGTCCTTTTATGTTTAATTTTATGAGGGCCACGGGTCTGTGTTGACTCAGCCTCAGGGACGACTCTGACCTCTT  
GGCCACAGAGGACTCACTTGCCACACCGAGGGCGACCCCGTCACAGCCTCAAGTCACTCCCAAGCCCCCTCCTT  
GTCTGTGCATCCGGGGCAGCTCTGGAGGGGGTTGCTGGGGAACCTGGCGCCATCGCCGGGACTCCAGAACCGCA  
GAAGCCTCCCCAGCTCACCCCTGGAGGACGGCCGGCTCTCTATAGCACCAGGGCTCACGTGGGAACCCCTCCC  
ACCCACCGCCACAATAAAGATCGCCCCACCTCCACCTC

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**FIGURE 5096**

MAAALFVLLGFALLGTHGASGAAGTVFTTVEDLGSKILLTCSLNDSEVTGHRWLKGGVVLKEDALPGQKTEFK  
VDSDDQWGEYSCVFLPEPMGTANIQLHGPPRVKAVKSSEHINEGETAMLVCKSESVPPVTDWAWYKITDSEDKAL  
MNGSESRRFFVSSSQGRSELHIENLNMEADPGQYRCNGTSSKGSQAIITLRVRSHLAALWPF LGIVAEVLVLVTI  
IFIYEKRRKPEDVLDDDDAGSAPLKSSGQHQNDRGKNVRQRNSS



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**FIGURE 5097**

CGGGCGGCGGCGGCAGCGGTTGGAGGTTGTAGGACCGGCGAGGAATAGGAATCATGGCGGGCTGCGCTGTTTCGTGC  
TGCTGGGATTTCGCGCTGCTGGGCACCCACGGAGCCTCCGGGGCTGCCGGCACAGTCTTCACTACCGTAGAAGACC  
TTGGCTCCAAGATACTCCTCACCTGCTCCTTGAATGACAGCGCCACAGAGGTACAGGGCACCGCTGGCTGAAGG  
GGGGCGTGGTGTGAAGGAGGACGCGCTGCCCGGCCAGAAAACGGAGTTCAAGGTGGACTCCGACGACCAGTGGG  
GAGAGTACTCCTGCGTCTTCTCCCGAGCCCATGGGCACGGCCAACATCCAGCTCCACGGGGCTCCAGAGTGA  
AGGCTGTGAAGTCGTCAGAACACATCAACGAGGGGGAGACGGCCATGCTGGTCTGCAAGTCAGAGTCCGTGCCAC  
CTGTCACTGACTGGGCCTGGTACAAGATCACTGACTCTGAGGACAAGGCCCTCATGAACGGCTCCGAGAGCAGGT  
TCTTCGTGAGTTCTTCGCAGGGCCGGTCAGAGCTACACATTGAGAACCTGAACATGGAGGGCCGACCCCGGCCAGT  
ACCGGTGCAACGGCACCGAGCTCCAAGGGCTCCGACCAGGCCATCATCACGCTCCGCGTGCAGCCACCTGGCCG  
CCCTCTGGCCCTTCTGGGCATCGTGGCTGAGGTGCTGGTCTGGTCAACATCATCTTTCATCTACGAGAAGCGCC  
GGAAGCCCGAGGACGTCCTGGATGATGACGACGCCGGCTCTGCACCCCTGAAGAGCAGCGGGCAGCACCAGAATG  
ACAAAGGCAAGAAGCTCCGCCAGAGGAACCTTCTGAGGTGGCCCGAGGACGCTCCCTGCTCCACGTCTGCGCC  
GCCGCCGAGTCCACTCCAGTGCTTGCAAGATTCCAAGTTCTCACCTCTTAAAGAAAACCCACCCCGTAGATT  
CCATCATACACTTCTTCTTTTAAAGTTGGGTTTTCTCCATTAGGATTCTGTTTCTTAGGTTTTTTTCC  
TTCTGAAGTGTTCACGAGAGCCCGGGAGCTGCTGCCCTGCGGCCCGTCTGTGGCTTTCAGCCTCTGGGTCTGA  
GTCATGGCCGGGTGGGCGGCACAGCCTTCTCCACTGGCCGGAGTCAGTGCCAGGTCTTGGCCCTTGTGGAAAGT  
CACAGGTACACGAGGGGGCCCGTGTCTGCTGCTGAAGCCAATGCTGTCTGGTTGCGCCATTTTGTGCTTT  
TATGTTTAAATTTATGAGGGCCACGGGTCTGTGTTGACTCAGCCTCAGGGACGACTCTGACCTCTGGCCACAG  
AGGACTCACTTGCCACACCGAGGGCGACCCCGTCACAGCCTCAAGTCACTCCCAAGCCCCCTCCTGTCTGTGC  
ATCCGGGGCAGCTCTGGAGGGGTTTGTGGGGAAGTGGCGCCATCGCCGGGACTCCAGAACCGCAGAAGCCTC  
CCCAGCTACCCCTGGAGGACGGCCGGCTCTCTATAGCACCAGGGCTCACGTGGGAACCCCTCCACCCACCG  
CCACAATAAAGATCGCCCCACCTCCACCCTC

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**FIGURE 5098**

GGCACGAGGATACCTCCTCATCAACTCTGACATAGTGTGCGAACAGGACATCTACGAGTGGACTAAGATCAATGG  
CCGGCGGGGGTGCCGCGGGGGGGCGGGCGGGCGGAGTAGGTGGCGGGGCCATGCGCCGAGGCGTCGCCGCAT  
CCCGGACGGTACTTCTGCCACTGCTGCTCCGTGGAGATCGTCCCGCGCCTGCCGATTATATCTGTCCAAGATGC  
GAGTCTGGTTTTATCGAGGAGCTTCCGGAAGAGACCAGGAGCACAGAAAATGGTTCTGCCCCCTCCACAGCTCCC  
ACAGACCAGAGCCGGCCACCGCTGGAGCACGTGGACCAGCACCTGTTACAGCTGCCGCAGGGCTACGGACAGTTT  
GCTTTCGGCATCTTCGATGACAGCTTCGAGATCCCCACGTTCCCTCCTGGGGCGCAGGCTGACGACGGCAGGGAC  
CCTGAGAGCCGGCGGAGAGAGACCATCCGTCCCGGCACCGGTACGGCGCCGACAGCCCCGCGCCCGCCTCACC  
ACGCGCGGGGCCACCGCGCGGCACGAAGGCGTCCCCACGCTGGAAGGGATCATCCAGCAGCTCGTCAACGGCATC  
ATCACGCCCCGCCACCATCCCCAGCCTGGGCCCCCTGGGGAGTCTGCACTCAAACCCTATGGACTACGCCTGGGGG  
GCCAACGGCCTGGATGCCATCATCACACAGCTCCTCAATCAGTTTGAAAAACAGGCCCCCACCGGCAGATAAA  
GAGAAAATCCAGGCCCTCCCCACCGTCCCCGTCACTGAGGAGCACGTAGGCTCCGGGCTCGAGTGCCCTGTGTGC  
AAGGACGACTACGCGCTGGGTGAGCGTGTGCGGCAGCTGCCCTGCAACCACCTGTTCCACGACGGCTGCATCGTG  
CCCTGGCTGGAGCAGCACGACAGCTGCCCCGTCTGCCGAAAAAGCCTCACGGGACAGAACACGGCCACGAACCCC  
CCTGGCCTCACTGGGGTGAGCTTCTCCTCCTCGTCTCATCGTCTCCTCCAGCTCGCCCAGCAACGAGAACGCC  
ACAAGCAACTCGTGAGCCCCACGTCGGCCGTGGGAAAGCACGGGGCCTTTCCCACCCACCTCAGCCAGCGCCAC  
ACGGCACCCACAGACTGGGTGCCCCGGCGGCCACGCTTGGCTGGTCAGCGCTGCAGGTCCCGCCTGTTCCAGG  
GCAGGACCCGGGCCCCGGCCCCACGGCCCCCTGGCTTGGGAAGGCGTGGGCCACATGGTCCCCTCTGGGGCGTCCC  
CAGCCTCCCCGTCTCTGTCTAACCTCACCTCTAAACGTTACGCGGTGGAAAGATTTTATAATTTTAAATTAT  
TACTGCTTTGAAATAAACGGACGTTTGAGCTCACGTGGCGGCCATGCATGGTTTGTGGCGGAAGACGGGGCCAG  
CGGCTCCCCCAGCGCTGAAGCACGGGGTTACGCGGCTCCCCAGTGCTGCAGGTGCCGCCAGGACGGGCCACGTG  
GGCCCCCAGCCTCCCCCTCGGCCGCTCCACGACCCGGAGTAGGGGGGCTCGGGACCATGAGGATGACCAGCAAA  
ATTCAAGAACAAAACCTGCTCCAACAGACTTTTTTAAAGGAAAAAATATGTGTATCTTGAAAGCTATTTAAATAC  
ACTACTTACAAAGAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5099**

MAEASPHPGRYFCHCCSVEIVPRLPDYICPRCESGFIEELPEETRSTENGSA  
PSTAPTDQSRPPLEHVDQHLFTL  
PQGYGQFAFGIFDDSEIPTFPPGAQADDGRDPESRRERDHP  
SRHRYGARQPRARLTTRRATGRHEGVPTLEGI  
I  
QQLVNGIITPATIPSLGPWGVLSNPMDYAWGANGLD  
AIITQLLNQFENTGPPPADKEKI  
QALPTVPVTEEHVGS  
GLECPVCKDDYALGERVRQLPCNHLFHDGCIVPWLEQ  
HDCPVCRKSLTGQNTATNPPGLTGVSFSSSSSSSSSS  
SPSNENATSNS

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**FIGURE 5100**

CTTGTGAGTCTATAACTCGGAGCCGTTGGGTGCGTTTCTGCTATTCCGGCGCCTCCACTCCGTCCCCGCGGGTCTC  
TGCTCTGTGTGCCATGACGGCATTGTCCCAGATATAGCCGTTGGTACAAAGCGGGGATCTGACGAGCTTTTCTC  
TACTTGTGTCTACTAACGGACCGTTTATCATGAGCAGCAACTCGGCTTCTGACGAAACGGAATGACAGCAAGAA  
GTTCAAAGGTGACAGCCGAAGTGCAGGCGTCCCTCTAGAGTGATCCACATCCGGAAGCTCCCCATCGACGTAC  
GGAGGGGGAAGTCACTCTCCCTGGGGCTGCCCTTTGGGAAGGTACCAACCTCCTGATGCTGAAGGGGAAAAACCA  
GGCCTTCATCGAGATGAACACGGAGGCTGCCAACACCATGGTGAACCTACTACACCTCGGTGACCCCTGTGCT  
GCGCGGCCAGCCCATCTACATCCAGTTCTCCAACCACAAGGAGCTGAAGACCGACAGCTCTCCAACCAGGCGCG  
GGCCAGGCGGCCCTGCAGGCGGTGAACCTCGGTCAGTTCGGGGAACCTGGCCTTGGCTGCGCTCGGCGCGGCGCT  
GGACGCAGGATGGCGATGGCCGGGAGAGCCCGTGTCTCAGGATCATCGTGAGAACCTCTTCTACCTGTGAC  
CCTGGATGTGTGACACAGATTTTCTCCAAGTTCGGCACAGTGTGAAGATCATCACCTTACCAAGAACAACCA  
GTTCCAGGCCCTGTGTCAGTATGCGGACCCCGTGAAGCGCCAGCACGCCAAGCTGTGCTGAGCGGGCAGAACAT  
CTACAACGCTGCTGACGCTGCGCATCGACTTTTCCAAGCTACACGCTCAACGTCAAGTACAACAATGACAA  
GAGCCGTGACTACACAGCCAGACCTGCGCTTCCGGGGACAGCCAGCCCTCGCTGGACCAGACCATGGCCGCGGC  
CTTCGCTCTCCGTATGACAGGAGTGGTTTCCCTCCACCTTTGCCATTCTCAAGCTGACAGGCTTTCCGTTC  
GAACGCTCCAGCGCGCTTGGCCCCCTGGCCATCCCTCGGCGGCGGCGGCGAGCTGCGGCGGCGAGTCCGATCGC  
CATCCCGGGCCTGGCGGGGGCAGGAAATTCTGTATTGCTGGTCAGCAACCTCAACCCAGAGAGAGTACACCCCA  
AAGCCTCTTTATTTCTTTTCGGCGTCTACGGTGACGTGACGCGCTGAAGATCCTGTTCAATAAGAAGGAGAACGC  
CCTAGTGCAGATGGCGGACGGAACAGGCCAGCTGGCCATGAGCCACCTGAACGGGCACAAGCTGCACGGGAA  
GCCCATCCGCATCACGCTCTCGAAGCACCAGAAGCTGACAGTGCCTCGCGAGGGCCAGGAGGACAGGGCCTGAC  
CAAGGACTACGGCAACTCACCCCTGCACCGCTTCAAGAAGCCGGGCTCCAAGAATTCCAGAACATATTTCCGCC  
CTCGGCCACGCTGCACCTCTCCAACATCCCGCCCTCAGTCTCCGAGGAGGATCTCAAGGTCTGTTTTCCAGCAA  
TGGGGGCGTCTGCAAGGATTCAAGTTCTTCCAGAAGGACCGCAAGATGGCACTGATCCAGATGGGCTCCGTGGA  
GGAGCGGTTCCAGGCCCTCATTGACCTGCACAACCACGACCTCGGGGAGAACACCACCTGCGGGTCTCCTTCTC  
CAAGTCCACCATCTAGGGGACAGGCCCCACGGCGGGGCCCTGGCGACAACCTCCATCATTCCAGAGAAAAG  
CCACTTTAAAAACAGCTGAAGTGACCTTAGCAGACCAGAGATTTTATTTTAAAGAGAAATCAGTTTACCTGT  
TTTTAAAAAATTAATCTAGTTACCTTGCTCACCTGCGGTGACAGGGACAGCTCAGGCTCTTGGTGACTGTG  
GCAGCGGGAGTTCCCGGCCCTCCACACCCGGGGCCAGACCTCGGGGCCATGCTTGGTGGGGCTGTGTGCGGC  
GTGGGGCTGACAGTGGCGCCCCGACCAAGCTTGGCTTCTTGTGCTTAAAAAACCTGCTTCTGTCAGCCA  
CACACCCACCCGGGGTGTCTGGGGACCAAGGGGTGGGGGGTACACCAGAGAGAGGACAGGGGGCTGGCCGG  
CTCTGACAGGATCATGACGCTGGGGCGGCGGCGCGGCTGCGACACCCCAACCCAGCCCTCTAATCAAGTCA  
CGTGATTCTCCCTTACCCCGCCCCAGGGCCTTCCCTTCTGCCCCAGGCGGGCTCCCGCTGCTCCAGCTGCG  
GAGCTGGTGCACATAATCTGTATTATATACTTTGAGTTGACAGCTGTGCTGCTAGCAATATTTCCAGTTGA  
CCAAATATTCTAATCTTTTTTCAATTTATATGCAAAAGAAATAGTTTTAAGTAACTTTTATAGCAAGATGATACA  
ATGGTATGAGTGTAATCTAACTTCTTGTGGTATTACCTGTATGCTGTTACTTTTATTTTATTCCTTGTAAAT  
AAGTCACAGGCAGGACCCAGTTTCCAGAGAGCAGGCGGGGCGCCAGTGGGTGAGGCACAGGGAGCCCCGGTCC  
TATCTTAGAGCCCTGAGCTTCAAGGAAGGGCGGGCGTGTGCGCGCTCTGGCATCGCTCCGGTTGCCTTACA  
CCACGCCCTTACCTGCAGTCGCTAGAAAACCTGCTCTCAAACTTCAGGGTTTTTTCTTCTTCAAAATTTTGGAC  
CAAAGTCTCATTTCTGTGTTTTGCTGCTGCTGAGTGGACCCGGAAGGCGGGCGCTCCTCCTGTCTTCTCTG  
TGCTCTTTTACCGCCCCCGCTCTGTCCGGGGGCTCTCTAGGATCCCTTTCCGTAAAAGCGTGTAACAAG  
GGTGTAATATTTATAATTTTTTATACCTGTGTGAGACCCGAGGGGCGGCGCGCGGTTTTTATGGTGACACA  
AATGTATATTTTGCTAACAGCAATTCAGGCTCAGTATTGTGACCGCGGAGCCACAGGGGACCCACGCACATTC  
CGTTGCCCTTACCGATGGCTGTGACGCGGAGAGAACCATTAAACCGTTTGAAGAACTCTCCCTTGTCTAGC  
CCTGTGTTGCTGTGGACGCTGTAGAGGAGGTTGGCCAGTCTGTACCTGGACTTCGAATAAATCTTCTGTATCC  
TCGCTCCGTTCCGCCTTAAA

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**FIGURE 5101**

MDGIVPDIAGVTKRGSDELFTSTCVTNGPFFIMSSNSASAANGNDSKKFKGDSRSAGVPSRVIHIRKLPIDVTEGEV  
ISLGLPFGKVTNLLMLKGKNQAFIEMNTEEAANTMVNYTTSVTPVLRGQPIYIQFSNHKELKTDSSPNQARAQAA  
LQAVNSVQSGNLALAAASAAVDAGMAMAGQSPVLRRIIVENLFYPVTLDVLHQIFSKFGTVLKIITFTKNNQFQAL  
LQYADPVSAQHAKLSLDGQNIYNACCTLRIDFSKLTSLNVKYNNDKSRDYTRPDLP SGDSQPSLDQTMAAAFASP  
YAGAGFPPTFAIPQAAGLSVPNVHGALAPLAIPSAAAAAAAGRIAIPGLAGAGNSVLLVSNLNPVRTPQSLFI  
LFGVYGDVQVRKILFNKKENALVQADGNQAQLAMSHLNHGKLGKPIRITLSKHQNVQLPREGQEDQGLTKDYG  
NSPLHRFKKPGSKNFQNIFFPSATLHLSNIPPSVSEEDLKVLFSNNGGVVKGFKFFQKDRKMALIQMGSVEEAVQ  
ALIDLHNHDLGENHHLRVSFSTI

CTTGTAGACTATAAAGCTCGGAGCCGTTGGGTGCGTTTCTCTGCTATTCCGGCGCCTCCACTCCGTCCTCCCGCGGGTCTGCTCTGTGTGCCATGGACGGCATTGTCCCAGATATAGCCGTTGGTACAAAGCGGGGATCTGACGAGCTTTTCTCTACTTTGTGTACTAAACGGACCGTTTATCATGAGCAGCAACTCGGCTTCTGCAGCAAACGGAAATGACAGCAAGAA GTTCAAAGGTGACAGCCGAAGTGCAGGCGTCCCCTCTAGAGTGATCCACATCCGGAAGCTCCCCATCGACGTACAGGAGGGGAAGTCATCTCCCTGGGGCTGCCCTTTGGGAAGGTCACCAACCTCCTGATGCTGAAGGGGAAAAACCA GGCCCTTCATCGAGATGAACACGGAGGAGGCTGCCAACACCATGGTGAACACTACACCTCGGTGACCCCTGTGCTGCGCGGCCAGCCCATCTACATCCAGTTCTCCAACCACAAGGAGCTGAAGACCGACAGCTCTCCCAACCAGGCGCG GGCCAGGCGGCCCTGCAGGCGGTGAACCTCGGTCCAGTCGGGGAACCTGGCCTTGGCTGCCTCGGCGCGCGCGCG GGACGCAGGGATGGCGATGGCCGGGCAGAGCCCCGTGCTCAGGATCATCGTGGAGAACCTCTTCTACCTGTGAC CCTGGATGTGTGTCACCAGATTTTCTCCAAGTTCGGCACAGTGTTGAAGATCATCACCTTCACCAAGAACAACCA GTTCCAGGCCCTGCTGCAGTATGCGGACCCCGTGAGCGCCAGCAGCCAAAGCTGTGCTGGACGGGCAGAACAT CTACAACGCCTGCTGCACGCTGCGCATCGACTTTTCCAAGCTCACCAGCCTCAACGTCAAGTACAACATGACAA GAGCCGTGACTACACAGCCAGACCTGCCCTCCGGGGACAGCCAGCCCTCGCTGGACCAGACCATGGCCGCGGC CTTCGGTGACCTGGTATAATCTCAGCCTCTCCGTATGCAGGAGCTGGTTTCCCTCCACCTTTGCCATTCTCTCA AGCTGCAGGCCCTTTCCGTTCCGAACGTCCACGGCGCCCTGGCCCCCTGGCCATCCCCCTGGCGGGCGCGGCAG TGCGGCGGCAGGTCGGATCGCCATCCCGGGCCTGGCGGGGACAGGAAATCTGTATTGCTGGTCAGCAACCTCAA CCCAGAGAGAGTCACACCCCAAAGCCTCTTTATTCTTTTCGGCGTCTACGGTGACGTGCAGCGCGTGAAGATCCT GTTCAATAAGAAGGAGAAGCGCCTAGTGAGATGGCGGACGGCAACCAGGCCAGCTGGCCATGAGCCACCTGAA CGGGCACAAGCTGCACGGGAAGCCCATCCGCATCAGCTCTCGAAGCACCAGAAGCTGCAGCTGCCCGCGAGGG CCAGGAGGACCAGGGCCTGACCAAGGACTACGGCAACTCACCCCTGCACCGCTTCAAGAAGCCGGGCTCCAAGAA CTTCAGAACATATTTCCGCGCCTCGGCCACGCTGCACCTCTCCAACATCCGCGCCTCAGTCTCCGAGGAGGATCT CAAGGTCTGTTTTCCAGCAATGGGGGCGTCGTCAAAGGATTCAAGTTCTTCCAGAAGGACCGCAAGATGGCACT GATCCAGATGGGCTCCGTGGAGGAGGCGGTCCAGGCCCTCATTGACCTGCACAACCACGACCTCGGGGAGAACCA CCACCTGCGGGTCTCCTTCTCCAAGTCCACCATCTAGGGGCACAGGCCCCACGGCCGGGCCCCCTGGCGACAAC TTCCATCATTCCAGAGAAAAGCCACTTTAAAAACAGCTGAAGTGACCTTAGCAGACCAGAGATTTTATTTTTTAA AAGAGAAATCAGTTTACCTGTTTTTAAAAAATAAATCTAGTTACCTTGCTCACCTTGCGGTGACAGGGACAG CTCAGGCTCTTGGTGACTGTGGCAGCGGGAGTTCCCGGCCCTCCACACCCGGGGCCAGACCTCGGGGCCATGCC TTGGTGGGGCCTGTGTGGGCGTGGGGCCTGCAGGTGGGCGCCCCGACCACGACTTGGCTTCTTGTGCCTTAAA AAACCTGCCTTCTCTGCAGCCACACACCCACCCGGGGTGTCTGGGGACCCAAGGGGTGGGGGGTGCACACCAGAG AGAGGCAGGGGGCCTGGCCGGCTCCTGCAGGATCATGCAGCTGGGGCGCGGCGGCCGCGGCTGCGACACCCCAAC CCCAGCCCTCTAATCAAGTCACGTGATTCTCCCTTCACCCCGCCCCAGGGCCTTCCCTTCTGCCCCAGGCGGG CTCCCCGCTGCTCCAGCTGCGGAGCTGGTGCACATAATCTCTGTATTATATACTTTGCAGTTGCAGACGTCTGTG CCTAGCAATATTTCCAGTTGACCAAATATTTCTAATCTTTTTTCAATTTATATGCAAAAGAAATAGTTTAAAGTAAC TTTTATAGCAAGATGATACAAATGGTATGAGTGTAATCTAAACTTCTTGTGGTATTACCTTGTATGCTGTTACT TTTATTTTATCTCTTGTAAATTAAGTCACAGGCAGGACCCAGTTTCCAGAGAGCAGGCGGGGCCCGCCAGTGGGT CAGGCACAGGGAGCCCCGGTCTATCTTAGAGCCCTGAGCTTCAGGGAAGGGGCGGGCGTGTGCGCGCCTCTGGC ATCGCCTCCGTTGCTTTACACCACGCCTTCACCTGCAGTCGCCTAGAAAACTTGCTCTCAAACTTCAGGGTTTT TTCTTCTTCAAATTTTGGACCAAAGTCTCATTTCTGTGTTTTGCGCTGCCTCTGATGCTGGGACCGGAAGGCGG GCGCTCCTCCTGTCTTCTCTGTGCTCTTTCTACCGCCCCCGCGTCTGTCCCGGGGCTCTCCTAGGATCCCTT TCCGTAAAAGCGTGTAACAAGGGTGTAATATTTATAATTTTTTATACCTGTTGTGAGACCCGAGGGGCGGCGGC GCGGTTTTTTATGGTGACACAAATGTATATTTTGTAAACAGCAATTCCAGGCTCAGTATTGTGACCGCGGAGCCA CAGGGGACCCACGCACATTCGTTGCCCTTACCCGATGGCTGTGAGCGGGAGAGAACCAGATTAAAACCGTTTGA GAAACCTCTCCTTGTCTAGCCCTGTGTTGCTGTGGACGCTGTAGAGGCAGGTTGGCCAGTCTGTACCTGGACT TCGAATAAATCTTCTGTATCTCGCTCCGTTCCGCCTTAAAAA

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**FIGURE 5103**

MDGIVPDIAGVTKRGSDELFSTCVTNGPFFIMSSNSASAANGNDSKKFKGDSRSAGVPSRVIHIRKLPIDVTEGEV  
ISLGLPFGKVNTNLLMLKGKNQAFIEMNTEEAANTMVNYTTSVTPVLRGQPIYIQFSNHKELKTDSSPNQARAQAA  
LQAVNSVQSGNLALAASAAAVDAGMAMAGQSPVLRIIVENLFYPVTLDDLHQLFSGFTVLKIIITFTKNNQFQAL  
LQYADPVSAQHAKLSLDGQNIYNACCTLRIDFSKLTSLNVKYNNDKSRDYTRPDLP SGDSQPSLDQTMAAAF GAP  
GIISASPYAGAGFPPTFAIPQAAGLSVPNVHGALAPLAIPSAAGRIAPGLAGAGNSVLLVSNLNP ERV  
TPQSLFILFGVYGDVQRVKILFNKKENALVQADGNQAQLAMSHLNHKLHGKPIRITLSKHQNVQLPREGQEDQ  
GLTKDYGNSPLHRFKKPGSKNFQNIFFPSATLHLSNIPPSVSEEDLKVLFSSNGGVVKGFKFFQKDRKMALIQMG  
SVEEAVQALIDLHNHDLGENHHLRVFSKSTI

**FIGURE 5104**

GCATGCCCCATCAGCCTTCAGCTTGAGCCCGCGGGCCCCCGCCCGCCCTGCCACCTGCACTGCCCCGGCT  
CCCCCGCGGCCCCACGCTGCAGTGCGGCCGGGCCCCCTCCCGCAGGGGCCGCCCGCCGCCACCCCTAGCG  
CCCGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGCGGCCGAGGGCCATGAACTACAGGCCGTGATGGAGA  
CGCTGTTGCAGCGCAGCAGCGGCGGCCAGGAGCTGGAGGCCGGCAGCAGCTGCCCCCGATCCCCCTGCTG  
CACCCCCCGCGCGGGCCCCGGCTGCCCCGACGAGGACAGAGACCCGAGAGTGCCCGGATGCAGCGGGCTCAGA  
TGCCCGCACTGGCAGCCATGCGGGCTGCAGCTGCGGGCTGGGACACCCAGCCAGCCCCGGCGGCTCTGAGGATG  
GGCCCCAGGCTCGGAGGAGGAGGACGCGGCCCGGGAGGGGACACCGGGCTCACCGGGCGAGGCAGAGAAGGGC  
CAGGAGAGGAGCACTTTGAGGACATGGCCTCCGACGAGGACATGAAGCCCAAATGGGAGGAGGAGGAGATGGAGG  
AAGACCTCGGGGAGGATGAGGAGGAGGAGGAGGAGGATTACGAGGATGAGGAGGAGGAGGAGGAGGACGAGGAGGGGC  
TGGGCCCCCAGGCCCTGCCAGCTTGGGCACCACGGCACTGTTTCCCCGAAAGGCCAGCCACCCAGGCCTTCC  
GCGGCGATGGCGTTCCAGGGTGTGGGGGGCCAGGAGCGCCGGGGCTGGCCCTGCCACCCCGAGGGGGCCG  
CCCACGTAGCCCCGAGCTGCAGCCGCTGACCACGGCGACTGGACTTACGAGGAGCAGTTTTAAGCAGCTCTACG  
AACTCGACGGGGACCCCAAGAGGAAGGAATTCCTGGATGACTTGTTTACGCTTCATGCAGAAGCGAGGGACACCTG  
TGAACCGCATCCCCATCATGGCCAAACAGGTCTCTTGACCTGTTTATGCTGTACGTGCTGGTGACGGAGAAGGGCG  
GCCTCGTGAGGTTCATCAACAAGAAGCTGTGGCGTGAGATACCAAGGGCCTCAACCTGCCACGTCCATACCA  
GTGCAGCCTTCACCTGCGGACCCAATACATGAAGTACCTGTACCCCTACGAGTGTGAGAAGCGGGGCCCTAGTA  
ACCCCAATGAGCTCCAGGCAGCCATAGACAGCAACCGACGGGAGGGCGCGGCCAGAGCTTTGGTGGCTCCCTCT  
TTGCCTACTCGCCAGGCGGGGCACACGGCATGCTCTCCTACCCCAAGCTACCCGTGTCTCTCCCTGGGCCTGGCCG  
CAAGCACCAATGGCAGGCTCCATCACCCCGCCCCCTAAGATCAAGAAAGAGGAGGACTCAGCCATCCCCATCACAG  
TCCCTGGCCGCTGCTGTGTCTCCCTGGCGGGCCACCCTGTGGTGGCAGCCCAGGCAGCAGCTGTGCAAGCAGCAG  
CGCCCAAGCAGCTGTGGCCGCACAGGCAGCTGCCCTGGAACAGCTGCGGGAGAAGCTGGAGTCTGCAGAGCCTC  
CGGAGAAGAAGATGGCCCTGGTGGCCGATGAGCAGCAACGGCTGATGCAACGTGCACTCCAGCAGAACCTTCTTG  
CCATGGCGGGCCAGCTGCCATGAGCATTGCGATCAACAGCCAAGCCTCCGAAAGCCGCCAGGACTCTGCTGTGA  
ACCTGACGGGCAACACGCGAGCAACAGCATCAGCATGTGCGTGGAGATCAACGGCATCATGTACACAGGAGTTC  
TGTTTGCTCAGCCGCCGGCCCCACGCCAACCTCTGCTCCCAACAAAGGAGGCGGCGGGCGGGCGGCAGCAGCA  
GCAACGCAAGCGCGCCGGGAGGAAAACACCGGAACAGCGGCGGCCAGGCTGGGCCAGCGGGGCTGTCCACACCCT  
CCACATCTACCTCAAATAACTCGTTGCCTTTAACCGCATCACTCCCCACCCGCCACCCACCCTGGAGCCCGCGGC  
CTGGGCAGGGGGTCCAGGTGGGCCACACAGGGGCCAGGATGGCGGAAGATACGGGTGGGGAGGGAAGATATCCAG  
AAAGGAGCCACAGCTGACGCCAAAAAGAAAAGAAAAAGATATATATATATATATATATATATATATATACGTATATAT  
ATAAAGAAGAATTTAATAAAAACAGGGGAAAACCAAGGAACACTTGAATTTCTCAGGTTTTGGACATTCAGAGAGA  
TGAATTGTGAGAACAGCAAAGAAATCCATCAGAAAAACAGAAAGAGGCAGACGTTTCCAGGGCGTTTACGCAGC  
CCTGATGGACCGAAGGCTCTGGTGTCTGGTTTGGCCCCACAGCAGTGTGGGCCGATCCTGTTTACCTCATACATC  
CCTGCACTGTGTGTTTTTCATTTTTGTCTGCTTTAGTTTCTTTTTATTTTCTATTACCACACACTCACCCTCCC  
AGCTTCTCGTGTCCAGTGAAACCCTGAACCAAGATCACTGAATTTTTGTTTTTTTCTGTGTGCTTTGGGAAAT  
TTTTTTTTCTCTGTAGGGTTTTTAAGAGGTTTTCGGGGTTTTGTTGTGTAAATATTCTATTTTATTCTTGGGGGA  
TCAAACCTTAGGAAAAGGATATCTATATATCTATATAGCTATATATTTGTGTTCTTCAGGGAACTGGTCTTGA  
AAAAGCAAGAAAAAAGCAAAAAA



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**FIGURE 5105**

MKLQAVMETLLQRQQRARQELARQQLPPDPFPAAPPGRARAAAPDEDREPESARMQRAQMAALAAMRAAAAGLGHP  
ASPGGSEDGPPGSEEEEDAAREGTPGSPGRGREGPGEEHFEDMASDEDMKPKWEEEEEEMEEDLGEDEEEEEEDYEDE  
EEEEDEEGLGPPGPASLGTTALFPRKAQPPQAFRGDGVPRVLGGQERPGPGPAHPGGAAHVAPQLQPPDHGDWTY  
EEQFKQLYELDGDPKRKEFLDDLFSFMQKRGTVPVNRIPIMAKQVLDLFLMLYVLVTEKGGLVEVINKKLWREITKG  
LNLPTSITSAFTLRTQYMKYLYPYECEKRGLSNPNELQAAIDSNRREGRRQSFGGSLFAYSPGGAHGMLSSPKL  
PVSSLGLAASTNGSSITPAPKIKKEEDSAIPITVPGRLPVSLAGHPVVAAQAAAVQAAAAQAAVAAQAAALEQLR  
EKLESAEPPPEKKMALVADEQQRLMQRALQQNFLAMAAQLPMSIRINSQASESRQDSAVNLTGTNGSNSISMSVEI  
NGIMYTGVLFAQPPAPTPTSAPNKGSGGGGGGSSSNAGGRGGNTGTSGGQAGPAGLSTPSTSTSNNSLP

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**FIGURE 5106**

GGCAAGATGCGGCGCCCATGGAGGTGGCCGTGTGTACGGACTCGGCGGCCCCGATGTGGAGCTGCATCGTGTGG  
GAACTTCACTCGGGCGCCAACTGTCTACCTACCGCGGCGGCCAGGCGGGACCCCGCGGCCTGGCGCTGCTCAAT  
GGCGAGTATCTGCTGGCGGCGCAGCTGGGCAAGAATTACATCAGCGCCTGGGAGCTCCAGCGGAAGGACCAGCTC  
CAGCAGAAGATCATGTGCCCCGGGCCTGTACCTGTCTGACTGCATCACCCAATGGTCTCTACGTCTCTGGCAGGA  
GTTGCAGAAAGCATCCACCTGTGGGAGGTCTCCACCGGGAACCTTCTGGTCATCCTGAGTCGACACTACCAGGAC  
GTCTCCTGCCTTCAGTTCACAGGGGACAGCAGCCACTTCATCTCAGGGGGCAAGGACTGCCTGGTGTGTTTGG  
AGCCTCTGCAGCGTGTGCAGGCCGACCCCTCCAGGATTCGGGCGCCAGGCACGTCTGGTCTCACCACGCGCTC  
CCCATCACGGACCTGCACTGCGGCTTTGGGGGCCCCCTGGCCCCGGGTGGCCACCTCCTCACTGGACCAGACGGTG  
AAGCTATGGGAGGTCTCCTCGGGGGAGCTGCTGCTCTCCGTCTCTTTGACGTGTCCATCATGGCAGTGACCATG  
GACCTGGCTGAGCACCATATGTTCTGCGGGGGCAGTGAGGGCTCCATCTTCCAGGTGACCTCTTCACCTGGCCC  
GGACAGAGGGAGAGGAGCTTCCACCCAGAGCAGGACGCCGGGAAGGTCTTCAAAGGGCACAGGAACCAGGTGACT  
TGCTGTCACTGTCCACTGACGGCAGCGTGTCTCTCAGGCTCCACGACGAGACCGTGCGCCTCTGGGACGTG  
CAGAGCAAGCAGTGCATCCGGACGGTGGCCCTCAAAGGCCCAAGTCACCAATGCCGCCATCCTGCTGGCGCCCGTC  
AGCATGCTGAGCTCAGACTTCAGGCCAGCCTGCCGTGCCCCACTTCAACAAGCACCTGCTGGGCGCCGAGCAC  
GGGGACGAGCCGCGCCACGGGGGCTCACTCTGCGCCTGGGCCTCCACCAGCAGGGCTCGGAGCCCAGCTACCTG  
GACCGCACGGAGCAGCTGCAGGCCGTCTGTGCAGCACCATGGAGAAGAGCGTGCTCGGCGGCCAGGACCAGCTG  
CGCGTCCGTGTGACGGAGCTGGAGGACGAGGTGCGCAACCTGCGCAAGATCAATCGGGACCTGTTGACTTCTCC  
ACGCGCTTCATCACGCGGCCGGCCAAGTGAGGCCCGGAGACCCCGGCCCGAGGCGCCAGGCCTGAGCCCCATGC  
CTCCCAGCAACCAGGGCCCGCGGTGTGGCCCCCACCAGGCCAGGCCTGGACTCTCCTCAGTTCTGTGTCTGT  
CGGGTTTTTCTCTGTGACTGGGCCGTCTTGGTGTCTCGTGGCACGCGTCACAGTGGTGTAGTCTGTTTTTAAC  
AAAAGAGGATGAAAAGCC

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**FIGURE 5107**

MAAPMEVAVCTDSAAPMWSCIVWELHSGANLLTYRGGQAGPRGLALLNGEYLLAAQLGKNYISAWELQRKDQLQQ  
KIMCPGPVTCLTASPNGLYVLAVAGVAESIHLWEVSTGNLLVILSRHYQDVSCLOFTGDSSHFISGGKDCLVLVWSL  
CSVLQADPSRIPAPRHVWSSHLPITDLHCGFGGGLARVATSSLDQTVKLWEVSSGELLSVLFVDSIMAVTMDL  
AEHHMFCCGSGSEGSIFQVDLFTWPGQRETSFHPEQDAGKVFKGHRNQVTCLSVSTDGSLVSGSHDETURLWDVQS  
KQCIRTVALKGPVTNAAILLAPVSMSSDFRPSLPLPHFNKHLGAEHGDEPRHGGLTLRLGLHQQGSEPSYLDL  
TEQLQAVLCSTMEKSVLGGQDQLRVRVTELEDEVRLRKINRDLDFDFSTRFITRPAK

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**FIGURE 5108**

ATGAGCTCCACGCAGTTCAACAAGGGCCCCCTCGTACGGGCTGTCGGCCGAGGTCAAGAACCGGGCTCCCGCGAAT  
CTTGGGGAGCACCCAGGTCTGAGATCTGGGGGACGAGTGACCCATTCCCCCCCCAACATCTAGGGGTAGTTGGG  
TCTGACTTCGTCCCCTCGCCATGGCCCCAGGACCCCCACGTGTCCTTACAGCTGACTTCTGCAGGGGAACTGCC  
TCTGCACGCTCTGAGGGCACCGGCCCTGCCAGCCCCAACAGCCACCTGCCCGGCGGCACTCCAGGGCCGGCAGAC  
TGGAGGGAGAATTCCTGCTTCCCCGCTGGGCCATCTGCACCCTGCATTCATAGAGCCCCCGTGCAGTGGGGTGG  
GCACCCTGCCGCACCCTGCATACAGCCGGCTAA

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**FIGURE 5109**

ACCAGCTCCTGTCCAAATATGACCCCCAGAAGGAGGCAGAGCTCCGCACCTGGATCGAGGGACTCACCGGCCTCT  
CCATCGGCCCGACTTCCAGAAGGGCCTGAAGGATGGAACCTATCTTATGCACACTCATGAACAAGCTACAGCCGG  
GCTCCGTCCCCAAGATCAACCGCTCCATGCAGAACTGGCACCAGCTAGAAAACCTGTCCAACTTCATCAAGGCCA  
TGGTCAGCTACGGCATGAACCTGTGGACCTGTTTCGAGGCCAACGACCTGTTTGAGAGTGGGAACATGACGCAGG  
TGCAGGTGTCTCTTCTCGCCCTGGCGGGGAAGGCCAAGACTAAGGGGCTGCAGAGCGGGGTGGACATTGGCGTCA  
AGTACTCGGAGAAGCAGGAGCGGAATTTTCAGCATGCCACCATGAAGGCTGGCCAGTGCCTCATCGGGCTGCAGA  
TGGGCACCAACAAATGCGCCAGCCAGTGGGGCATGACTGCCTACGGCACGAGAAGGCATCTCTATGACCCCAAGA  
ACCATATCTGCCCCCATGGACCACTCGACCATCAGCCTCCAGATGGGCACGAACAAGTGTGCCAGCCAGGTGG  
GCATGACGGCTCCCGGGACCCGGCGGCACATCTATGATACCAAGCTGGGAACCGACAAGTGTGACAACTCCTCCA  
TGTCCCTGCAGATGGGCTACACGCAGGGCGCCAACCAAGAGCGGCCAGGTCTTCGGCCTGGGCGGGCAGATATATG  
ACCCCAAGTACTGCCCGCAAGGCACAGTGGCCGATGGGGCTCCCTCGGGCACCGGCGACTGCCCGGACCCGGGGG  
AGGTCCCTGAATATCCCCCTTACTACCAGGAGGAGGCCGGCTACTGAGGCTCCCAGCAGCTCTCTCCCCACATC  
GTCTGCCCATCTGGGTTTTTTGGGTTTTTCTGTGTTTTTCATCTTTTTTTTTTTTTCTTAACCCGTTTCACTGCTGC  
CAGTCAACCAAGGGTCTGTGAGTGTGAGCGTGGGATCAGGCAGCAGAGCTTTTTTCCCTTTGCTTGTATCCTTC  
GCAAGGCTGAGCCACTGGGCTGTGGGGGAAGGGGTCAAGGCCATATCCCAATACGTGTAGGGCGAGGGTCCCTGC  
TGGCACATTCAGGCTGTGCTGGGAAGAAGAGACCTGGGCTTGGAAGGAACCGGTCCCCGACGGTTTTCTGCTTGCC  
TCGCCTCTTCCCCCTTTTGTGAGCTGAGCAGTTTGTGGTTTTCTATGCCCGCAAGTTTCAGGAAGTATTACAAAA  
GAAAAATACATTTTTTCCCCCAGGGGTGGGGCAAGGACAGTGGAGAGAGTGCTAGGAAATGAGTCCCTGGGAAA  
GGGGACCGGGCCGTGATGTTAAATATCTCCGGCTCCCAAGTGACTGGATTTCCTAGGACCTTCAGACCAACAGA  
CTTCAGACCTCAGACCTGCCCCGGGGCCAGGTGGAGAAAGTGAGGGCCGTACAAGGAAGTGAAATTCAGATTG  
TTGGGGCTAAGCCTGACCCCTCTCCATGCTCCCCGCCCCAACCCACTCTGGCCTCAGTAGATTTTTTTTTTTCAGT  
TGTGGTTGTTGCCAGGCTGGAGTGCAGTGGCGCCATCTTGGCTCACTGCACCTCCACCTTCCGGGCTCAAGCGA  
TTCTCCAGCCTCAGCCTCCTGAGTAGCTAGGACTGCAGGTGCTCCACCACGCCCGGCTAATTTTTGTATTTTAG  
TAGAGATGGGGTTTCCCATGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAGGTGTGATCCGCCCGCCTCCGC  
CTCCCCAAGCGCTGAGATTACAGGTGTGAGCCACCGTGCCAGCCCTCAGTAGGTTTAAAGGAGCCCCAGCCC  
TCCTCCCTTCTGGGCCCCAGCAGTTATACTGCTCCATCTTCCCCGGCCACATGCCCCGCCAAGTACTGCACAGG  
GACCCCCCACCAGGGGACCTGCTCCGTGAGATAATGTGAAATACGACTGTGGACCAACGCAATAAAACCTCTG  
TTGTACGAAG

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**FIGURE 5110**

GGCGGCGGCGGCGGAGGCTGCCATGGACGACGAGGAGGAGACGTACCGGCTCTGGAAAATCCGCAAGACCATCAT  
GCAGCTGTGCCACGACCGTGGCTATCTGGTGACCCAGGACGAGCTTGACCAGACCCTGGAGGAGTTCAAAGCCCA  
ATCTGGGGACAAGCCGAGTGAGGGGCGGCCGCGCGCACGGACCTCACCGTGCTGGTGGCCCAACGATGACCC  
CACCGACCAGATGTTTGTGTTCTTTCCAGAGGAGCCCAAGGTGGGCATCAAGACCATCAAGGTGTACTGCCAGCG  
CATGCAGGAGGAGAACATCACACGGGCTCTCATCGTGGTGACGAGGGCATGACACCCTCCGCCAAGCAGTCCCT  
GGTCGACATGGCCCCAAGTACATCCTGGAGCAGTTTCTGCAGCAGGAGCTGCTCATCAACATCACGGAGCACGA  
GCTAGTCCCTGAGCACGTTCGTATGACCAAGGAGGAGGTGACAGAGCTGCTGGCCCGATATAAGCTCCGAGAGAA  
CCAGCTGCCCAGGATCCAGGCGGGGGACCCTGTGGCGCGCTACTTTGGGATAAAGCGTGGGCAGGTGGTGAAGAT  
CATCCGGCCCAGTGAGACGGCTGGCAGGTACATCACCTACCGGCTGGTGAGTAGCTACCGCCTGACAGCCCCTA  
GAGGCGGACACACAGCGACCCCCATCCCTGCAGGACAAACGCCCTGCCCTGCCAGAATCCGGCCCCACAGCTC  
TCACGGCTGCTGCTCCTCTGGACTCCCCAAGGCAGGTGGCTCCACCCACGTTCTCCCGTCTGGGGTGAGGCTT  
CCTGTGGCCCAGCCGCCCCATTACCTGTGGATTGTGCGAGATGCAGCCTCAGAAGGAACAAGGCCCCCAGAG  
GGAGGTCACCTGGGGGCAGCTGGTGCCGGGTCTTCACCCAGACCACGCTGGGTCCCCTCTGTTGGGGGTTTGGGG  
TCCGGGTCTCCACAGCCACTGCTTCTCCTGGGCCCTCGGCCTTCCACCCCTCGTCTTCCCTCCCTCGGGGGC  
CCTGATGCGTGGCGGCCCCCGCCCGCCTCGGCTCTTTACTCCATTACAGCCATGCACGCGCTCAAGCCACCAG  
GGTGCGAGATGCCAGCTCTGGAGTTCTCGGTTGTTGTAGGAGGTTGGGTGTTTTCAAATGGTAAAGATGTTTTGA  
GCAAATAAATTTGCTTGATACAG

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**FIGURE 5111**

MDDEEETYLWKIRKTIMQLCHDRGYLVTQDELDQTLEEFKAQSGDKPSEGRPRRTDLTVLVAHNDPTDQMFVF  
FPEEPKVGIKTIKVYCQRMQEENITRALIVVQQGMTPSAKQSLVDMAPKYILEQFLQQELLINITEHELVPHEVV  
MTKEEVTELLARYKLRENQLPRIQAGDPVARYFGIKRGQVVKIIRPSETAGRYITYRLVQ

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**FIGURE 5112**

CGGGGAGGCGCGGAAAGCCGACGCGCGTCCATTGGTCGGCTGGACGAGGGGAGGAGCCGCTGGCTCCCAGCCCCG  
CCGCGATGAGCCTCGGCCGCCCTTTGCCGCCTACTGAAGCCGGCGCTGCTCTGTGGGGCTCTGGCCGCGCCTGGCC  
TGGCCGGGACCATGTGCGCGTCCCGGGACGACTGGCGCTGTGCGCGCTCCATGCACGAGTTTTCCGCCAAGGACA  
TCGACGGGCACATGGTTAACCTGGACAAGTACCGGGGCTTCGTGTGCATCGTCACCAACGTGGCCTCCCAGTGAG  
GCAAGACCGAAGTAACTACACTCAGCTCGTCGACCTGCACGCCCGATACGCTGAGTGTGGTTTGGCGATCCTGG  
CCTTCCCGTGTAACCAAGTTCGGGAAGCAGGAGCCAGGGAGTAACGAAGAGATCAAAGAGTTCGCCGCGGGCTACA  
ACGTCAAATTCGATATGTTTCAGCAAGATCTGCGTGAACGGGGACGACGCCACCCGCTGTGGAAGTGGATGAAGA  
TCCAACCCAAAGGGCAAGGGCATCCTGGGAAATGCCATCAAGTGGAACTTCACCAAGTTCCTCATCGACAAGAACG  
GCTGCGTGGTGAAGCGCTACGGACCCATGGAGGAGCCCCTGGTGATAGAGAAGGACCTGCCCCACTATTTCTAGC  
TCCACAAGTGTGTGGCCCCGCCGAGCCCCTGCCACGCCCTTGGAGCCTTCCACCGGCACTCATGACGGCCTGC  
CTGCAAACCTGCTGGTGGGGCAGACCCGAAAATCCAGCGTGCACCCCGCCGGAGGAAGGTCCCATGGCCTGCTGG  
GCTTGGCTCGGCGCCCCCACCCTGGCTACCTTGTGGGAATAAACAGACAAATTAGAAAAAAAAAAAAAAAAA



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**FIGURE 5113A**

GCCCGAAACCCGGAAGTGAGCGGGCGGACGCTGCGAGGCTCGGAGAAACAGGCGCCGCGGGCTCCGCGCCCGGCCG  
GACCCGGGGCCGAGATCATGATGCTGCCGCCACCGCCGCCACCACGGAGCGAGAAGCCAGATAGACGCCCGGC  
GGCCCCGGGTCTTGAGTCCCGCCGCTGCTGCCCGGCCGAGGACCCACCCGCTGCCGCCGATGCTTGACG  
TGGGGCCCGCCATGGACAGGGATTACCCGCAGCATGAACCCCCCGCGGGCAGCCTCCTGTACAGCCCGCCG  
CCCTGCAGAGCGCCATGCTGCACTGCCCTACTGGAACACCTTCTCGCTGCCGCATACCTGCCTTCTCCAGCG  
ACAGCCGCCCGTTTCATGAGCTCCGCTCCTTCCTCGGCAGCCAGCCCTGCCCAGACACCAGCTATGCCCGCGTGG  
CCACCGCTCCAGCTTGCCACCAAGACCTGCGACTTTGCTCAGGACTCCTCCTATTTTGAGGACTTCTCCAACA  
TCTCCATCTTCTCCTCGTCCGTGGACTCCCTGTGCGACATCGTGGACACGCCGACTTCTGCCGGCTGACAGCC  
TCAACCAGGTGTCCACCATCTGGGACGATAACCTGCCCTCCACCCACGATAAGCTGTTCCAGCTCAGCAGGC  
CGTTTGAGGCTTCGAGGACTTTCTGCCCTCCACAGCACCCGCTTCTCGTCAGCTACCAGGAGCAGAGTGTGC  
AGAGCCAGCCAGAGGAGGAGGACGAGGCTGAGGAGGAGGAGCGGAGGAGCTGGGGCACACAGAGACCTACGCCG  
ACTACGTGCCGTCCAAGTCCAAGATCGGGAAGCAGCACCCAGACCGCGTGGTGGAGACCAGCACACTGTCCAGCG  
TCCACCCCCAGACATCACCTACACCTGGCCCTGCCCTCGGACAGCGGGGCCCTGTCTGCCCTGCAGCTAGAGG  
CCATCACCTACGCTGCCAGCAACACGAGGTCTGCTCCCCAGCGGCAGCGCGCGGGCTTTCTCATCGCGATG  
GGGCGCGCGTGGGCAAGGCCGACGGTGGCCGGAGTCATCTGGAGAACCACCTGCGCGGCCGGAAGAAAGCAT  
TGTGGTTCAGCGTCTCCAACGACCTCAAGTACGATGCGGAGCGGACCTGCGGGACATCGAAGCCACGGGCATCG  
CGGTGCACGCGCTCAGCAAGATCAAGTACGGTGACACCACTACCTCAGAGGGCGTCTCTTCGCCACCTACTCCG  
CCCTGATTGGGGAGAGCCAGGCCGCGGCCAGCACCGCACTCGCCTCCGGCAGATCCTGGACTGGTGTGGGGAGG  
CCTTCGAGGGCGTCATCGTGTTCGACGAGTGTCAAAAGCCAAAGATGCCGCTCCACCAAGATGGGCAAGGCTG  
TGCTAGACCTGCAGAACAGCTGCCCTGGCCCGCGTGGTCTACGCCAGCGCCACAGGTGCCTCTGAGCCTCGGA  
ACATGATCTACATGAGCCGCTTGGGTATCTGGGGCGAGGGCACACCTTCCGGAACCTTGAGGAGTCTCTGCACG  
CCATCGAGAAGAGGGGCTTGGCGCCATGGAGATCGTGGCCATGGACATGAAGGTCAGCGGCATGTACATCGCAC  
GCCAGCTCAGCTTCTCCGGCGTCACCTTCCGCATCGAGGAGATCCCGCTGGCCCCAGCCTTCGAGTGGCTCTACA  
ACCGCGCGGCCCTGCTGTGGGCCGAGGCCCTGAACGTGTTCCAGCAGGCGGGCGACTGGATCGGCCTGGAGTCGC  
GCAAGTCCCTGTGGGGCAGTTCTGGTCCGCACACCAGCGCTTCTCAAGTATCTGTGCATCGCAGCCAAGGTGC  
GCCGGCTGGTGGAGCTGGCCCGAGAGGAGTGGCGCGAGACAAGTGGTGGTTCATCGGGCTGCAGTCCACGGGCG  
AGGCGCGCACGCGGGAGGTGCTGGGGGAGAACGATGGGCACCTCAACTGCTTCTGCTCGGCCGCTGAAGGCGTGT  
TCCTGTCTGCTAATTGAGAAGCACTTTCGCTCCACCAAGAGAAAGCGGGACAGAGGAGCGGGCAGCAAGCGGAAAC  
GGCGACCTCGGGGACGCGGGGCCAAAGCCCCCGCTGGCGTGCAGACAGCGGGCGTCATCCGCATCAGTGACG  
ACAGCAGCACGGAGTCGGACCTGGCTGGACAGCGACTTCAACTCCTCCCCGAGTCCCTGGTGGATGACGACG  
TTGTATCGTTGATGCAGTGGGCTCCCCAGTGACGACCGGGGACCCCTGTGCCTCCTGCAGAGAGACCCGCATG  
GCCCCGGGTCTTGAGCGGGTGGAGCGGTGAAGCAGGATCTGCTGGACAAAGTGGCGCGGCTGGCCCGGGAAC  
TGCCAGTCAACACCTGGACGAGCTCATCGACAGCTGGGCGGGCCCCAGCGGTGGCGGAGATGACCGGCAGGA  
AAGGCCGCGTGGTGTCCAGGCCGACGGGACGGTGGCCTTCGAGTCGCGGGCAGAGCAGGGTCTGTCCATCGACC  
ACGTGAACCTCAGGGAGAAGCAGCGCTTCATGAGCGGCGAGAAGCTCGTGGCCATCATCTCGGAGGCCTCCAGCT  
CGGGTGTCTCCCTCCAAGCCGACCGCGGTGTCCAGAACCAGCGGCGCGCGTGCACATGACCTTGGAGCTGCCGT  
GGAGCGCCGACCGCGCCATCCAGCAGTTGGGCCGACCCACCGGTCCAACAGGTCTCCGCGCCAGAGTATGTCT  
TCCTCATCTCGAGCTGGCCGGGGAGCGCCGTTTCGCTCCATCGTGGCCAAGCGCCTGGAGAGTCTGGGGGCC  
TGACCCACGGAGACCGCGCGCCACGGAGTCCGTGACCTCAGCAAGTACAACCTTGAGAACAAGTATGGCACCC  
GGGCCCTGCACTGTGTCTCACCACCATCCTGAGCCAGACTGAGAACAAGTGCCTGTGCCCCAGGGATACCTG  
GAGGGTCCCCACCTTCTTCGGGACATGAAGCAGGGCCTGCTGTCTGTGGGCAATTGGTGGCCGGGAGTCCCGGA  
ATGGCTGCCTGGACGTGGAGAAGGACTGTTCCATCACCAGTTCTGAACCGCATCCTGGGGCTGGAGGTGCACA  
AGCAGAACGCCCTGTTCCAGTACTTCTCAGACACCTTCGACCACCTCATCGAGATGGACAAGCGGGAGGGCAAAT  
ACGACATGGGCATCCTGGACCTTGTCTCCGGTATCGAGGAGATCTACGAGGAGAGCCAGCAGGTGTTCTGGCTC  
CCGGGCACCCGACGAGCGGGCAGGTGGTCTTCTACAAGATCAGCGTGGACCGCGCCTGAAGTGGGAGGACGCCT  
TTGCCAAGTGTGCGGTGACGGGCCCCATGACGGCTTCTACCTCTCTACAGGTCCGCGGTAAACAAGCCCA  
GCTGCCTGTGCGGAGCAGAACCAGCGGCCAGTTCTTACGGTGTACAAGCCCAACATCGGCCGCGAGAGCCAGC  
TGGAGGCCCTGGACAGCCTCCGCCGCAAGTTCACCGGGTCACCGCGGAGGAGGCAAGGAGCCCTGGGAGAGT

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**FIGURE 5113B**

GCTACGCTTTGTGCTGACGCACTGCAGCCACAGCGCCTGGAACCGGCACTGCCGGCTGGCGCAGGAGGGTAAGG  
ACTGCCCTGCAGGGGCTGCGGCTGCGGCACCACTACATGCTGTGCGGCGCGCTGCTGCGCGTGTGGGGCCGCATCG  
CCGCCGTGATGGCCGACGTCAGCAGCAGCAGCTACCTGCAGATCGTGCGGCTGAAGACCAAGGACAGGAAGAAGC  
AAGTGGGCATCAAGATCCCCGAGGGCTGCGTGCGCCGGGTGCTGCAGGAGCTGCGGCTGATGGATGCGGACGTGA  
AGCGCAGGCAGGCGCCCGCCCTGGGCTGCCCCGCCCCGCCCCGCGCCCGCTGGCGCTGCCTTGCGGCCCCG  
GAGAGGTGCTGGACCTACCTACAGCCCCCGGCCGAGGCCTTCCCGCCGCCCCGCACTTCTCTTTCCCGGCGC  
CGCTGTCCCTGGACGCCGCCCCGGCGTCTGCGCGTGGGCACCCCCGACGCCAGGCCGACCCTGCGGCCCTCG  
CGCACCAGGGCTGCGACATCAACTTCAAGGAGGTGCTGGAGGACATGCTGCGCTCGCTGCACGCGGGGCCGCCCT  
CCGAGGGCGCGCTGGGGGAGGGCGCGGGGGCGGGGGCGCGCGGGCGGTGGTCCCGAGCGGCAGAGCGTGATCC  
AGTTTCAGCCCACCCTTCCCGGCGCCCAGGCTCCTCTCTGACACGCCTTTAGGCGAAACATGCCCCAAGACACAG  
GGACCGTTTCTCCCCTAGGAGCAGCGGTGGGGAGCAGGGCCAAGGTCCCCTGACCACTGCTCAGAGGAGCCCTAG  
GCCCTGGCCGCACTGCCTTCAGCGCCCGACCCGGGCCCCCACCTGGTCAGCCCTGGCGGGGCCCACTCAGGACAG  
CTGGGGGGCCGGGGCGTGGCAGGGCCCTCTCTGTGCCTCTCCTCCCAAGTAGGAAGGGGCTCCGGGTGGCTGCTCT  
GGGACTGGGCACCCACAAGGGCTCAGTGGGCCCAAACCCTTGAAATCCGTGAAACCGGGTGGTCCCAAGAGCTAG  
AAACTCAGGAAACCCAGGTGCTCAGGGCCCCGCGTCTCGGGGGCTCCGTGGGGCAGACCCCTGCTAATATATGC  
AATTCTCCCTCCCCAGCCCTTCCCTGACCCCTAAGTTATTGCCCCTCACCTCTCCCAGGCCCCAGGCCGCGGA  
GCTGGCAGGGTGGCGCCTGCGGTTTCTATGTATTTATAGCAAGTTCTGATGTACATATGTAAAGGACTTTTTTAA  
AT

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**FIGURE 5114**

CCCAGGGTCCCCGAGGACGAAGTTGACCCTGACCGGGCCGTCTCCAGTTCTGAGGCCCGGGTCCCACTGGAAC  
CGCGTCTGAGCCGCGTCCCGGACCCCGGTGCCGCGGTCCGCAGACCCTGCACCGGGCTTGGACTCGCAGCC  
GGGACTGACGTGTAGAACAATCGTTTCTGTTGGAAGAAGGGTTTTTCCCTTCCTTTTGGGGTTTTTGTTCCTTT  
TTTTTTTCTTTTTCTTTGTAAAAATTTTGAGAGAAGGGAAGTCGGAACACAAGGAAGGACCGCTCACCCGCGGACT  
CAGGGCTGGCGCGGGACTCCAGGACCCTGGGTCCAGCATGGAGGTGGTGGACCCGCAGCAGCTGGGCATGTTCA  
CGGAGGGCGAGCTGATGTGCGTGGGTATGGACACGTTTCATCCACCGCATCGACTCCACCGAGGTCTCTACCAGC  
CGCGCCGCAAGCGGGCCAAGCTCATCGGCAAGTACCTGATGGGGGACCTGCTGGGGGAAGGCTCTTACGGCAAGG  
TGAAGGAGGTGCTGGACTCGGAGACGCTGTGCAGGAGGGCCGTCAAGATCCTCAAGAAGAAGAAGTTGCGAAGGA  
TCCCCAACGGGGAGGCCAACGTGAAGAAGGAAATTCAACTACTGAGGAGGTTACGGCACAAAAATGTCATCCAGC  
TGGTGGATGTGTATACAACGAAGAGAAGCAGAAAAATATATATGTTGATGGAGTACTGCGTGTGTGGCATGCAGG  
AAATGCTGGACAGCGTGCCGGAGAAGCGTTTTCCAGTGTGCCAGGCCACGGGTACTTCTGTCTAGCTGATTGACG  
GCCTGGAGTACCTGCATAGCCAGGGCATTGTGCACAAGGACATCAAGCCGGGGAACCTGCTGCTCACCACCGGTG  
GCACCCTCAAAATCTCCGACCTGGGCGTGGCCGAGGCACTGCACCCGTTTCGCGCGGACGACACCTGCCGGACCA  
GCCAGGGCTCCCGGCTTTCCAGCCGCCGAGATTGCCAACGGCCTGGACACCTTCTCCGGCTTCAAGGTGGACA  
TCTGGTCCGCTGGGGTACCCCTCTACAACATCACACCGGTCTGTACCCCTTCGAAGGGGACAACATCTACAAGT  
TGTTTGAGAACATCGGGAAGGGGAGCTACGCCATCCCGGGCGACTGTGGCCCCCGCTCTCTGACCTGCTGAAAG  
GGATGCTTGAGTACGAACCGGCCAAGAGGTTCTCCATCCGGCAGATCCGGCAGCACAGCTGGTTCCGGAAGAAAC  
ATCCTCCGGCTGAAGCACCAGTGCCCATCCCACCGAGCCAGACACCAAGGACCGGTGGCGCAGCATGACTGTGG  
TGCCGTACTTGAGGACCTGCACGGCGCGGACGAGGACGAGGACCTCTTCGACATCGAGGATGACATCATCTACA  
CTCAGGACTTCACGGTGCCCGGACAGGTCCCAGAAGAGGAGGCCAGTCACAATGGACAGCGCCGGGGCCTCCCCA  
AGGCCGTGTGTATGAACGGCACAGAGGCGGCGCAGCTGAGCACCAAAATCCAGGGCGGAGGGCCGGGGCCCCAACCC  
CTGCCCCGAAGGCCTGCTCCGCCAGCAGCAAGATCCGCCGGCTGTGCGCCTGCAAGCAGCAGTGAGGCTGGCCGC  
CTGCAGCCCGTGTCCAGGAGCCCCGCCAGGTGCCCGCGCCAGGCCCTCAGTCTTCTGCGCGTTCCGCCCGCCT  
CCCGGAGAGGTGGCCGCCATGCTTCTGTGCCGACCACGCCCCAGGACCTCCGGAGCGCCCTGCAGGGCCGGGCAG  
GGGGACAGCAGGGACCGGGCGCAGCCCTCCCCCTCGGCCGCCCGGCAGTGACGCGGCTTGTGACTTCGCAGC  
CCCGGGCGGAGCCTTCCCGGGCGGGCGTGGGAGGAGGGAGGCGGCCTCCATGCACTTTATGTGGAGACTACTGGC  
CCCGCCCGTGGCCTCGTGCTCCGCAGGGCGCCAGCGCCGTCCGGCGGCCCCGCCGAGACCAGCTGGCGGGTGT  
GGAGACCAGGCTCCTGACCCGCCATGCATGCAGCGCCACCTGGAAGCCGCGCGGCCGCTTTGGTTTTTTGTTTG  
GTTGGTTCATTTTCTTTTTTCTTTTTTTTTTAAGAAAAATAAAAGGTGGATTG

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**FIGURE 5115**

GTCCTCCTCGCCCTCCAGGCCGCGCCGCGCGCGCGGAGTCCGCTGTCCGCCAGCTACCCGCTTCCTGCCGCCCCG  
CCGCTGCCATGCTGCCCCGCGCGCTGCTCCGCGCGCGGACTTGGCCGCCTCGTCCGCCACGCCGTGCCTATG  
CCGAGGCCGCGCGCCCCGGCTGCCGCCTCTGGCCCCAACCAGATGTCCTTCACCTTCGCCTCTCCACGCAGG  
TGTTCCTCAACGGTGCCAACGTCCGGCAGGTGGACGTGCCACGCTGACCGGAGCCTTCGGCATCCTGGCGGCC  
ACGTGCCCCACGCTGCAGGTCTGCGGCCGGGGCTGGTCGTGGTGATGCAGAGGACGGCACCACTCCAAATACT  
TTGTGAGCAGCGGTTCCATCGCAGTGAACGCCGACTCTTCGGTGCACTTGTGGCCGAAGAGGCCGTGACGCTGG  
ACATGTTGGACCTGGGGGCAGCCAAGGCAAACCTTGGAGAAGGCCAGGCGGAGCTGGTGGGGACAGCTGACGAGG  
CCACGCGGGCAGAGATCCAGATCCGAATCAGGGCCAACGAGGCCCTGGTGAAGGCCCTGGAGTAGGCGGTGCGTA  
CCCGGTGTCCCGAGGCCCGGCCAGGGGCTGGGCAGGGATGCCAGGTGGGCCAGCCAGCTCCTGGGGTCCCGGCC  
ACCTGGGGAAGCCGCGCTGCCAAGGAGGCCACCAGAGGGCAGTGCAAGGCTTCTGCCTGGGCCCCAGGCCCTGCC  
TGTGTTGAAAGCTCTGGGGACTGGGCCAGGGAAGCTCCTCCTCAGCTTTGAGCTGTGGCTGCCACCCATGGGGCT  
CTCCTTCGCCTCTCAAGATCCCCCAGCCTGACGGGCCGCTTACCATCCCCCTGCCCCTGCAGAGCCAGCCGCC  
AAGGTTGACCTCAGCTTCGGAGCCACCTCTGGATGAACTGCCCCAGCCCCGCCCATTAAGACCCGGAAGCC  
TGAAAAAAAAAAAAAAAAA

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**FIGURE 5116**

MLPAALLRRPGLGRLVRHARAYAEAAAAPAAASGPNQMSFTFASPTQVFFNGANVRQVDVPTLTGAFGILAAHVP  
TLQVLRPGLVVVHAEDGTTSKYFVSSGSIAVNADSSVQLLAEAEAVTLDMLDLGAAKANLEKAQAELVGTADEATR  
AEIQIRIEANEALVKALE

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**FIGURE 5117**

CAGCAGCGGGCGGCCGCGCGTGACATCGGCACCATCCTGCAGATCCTGAACGACCTCCTGAGCGCCACCCGGCA  
CTACCAGGGCATGCCCCCTTCGCTGGCCAGCTCCGCTGCCACGCCAGTGCTCCCCGGCCTCACCGCCCCCGA  
CCTGGCCCCCAGAATACTCCTGCGAGAAGCTCACGGCTGCCCCCTCAGCCTCCCTGCTGCAGGGCCAGAGCCA  
GATCCGCATGTGCAAGCCCCCGGGGGACCGGCTTCGGCAGACAGAAAACCGCGCCACGCGCTGCAAGGTGGAACG  
GCTGCAGCTGCTTCTGCAGCAGAAAACGGCTCCGTAGAAAGGCCCGCGGGACGCGCGGGGTCCGTACCACTGGTC  
ACCCAGCCGCAAGGCCGCGCCGAGCGACAGCAGTAGCAGCGGGGGCGCGGCAGCCCCAGCGAGGCCTCCGGCTT  
GGGCTCGACTTCGAGGACTCCGTGTGGAAGCCAGAAGTCAACCTGACATCAAGTCAGAGTTCGTGGTGGCTTA  
GGATCTTCGGATCGGCCACCTCGCCCCCTCGACCCAGCCAGGGCGGGCGGGACTCCGAGAGCCCCGGAGAGA  
ACGTGGCCAGCCCTGGAGGGCAGGCGGCCACTCCCCAGCCAGAAGTCTTTTTTCTTTTCTTTTCTTTTATT  
TTTTTTCTTTTTTTTAAAAAGTTCTGACCGTGGTTTCTGGACTCTTCAAGGCTTTGCTTCTACCTCCTTAC  
CCTTCACTCCTGCCCTCCTCTTCTCCTCCTCCTCCTCCTCCTCGTCTGTCTCCTTTCACCTCTGCCAGGTCCGT  
CCTCCCTGCCAACCTTCCCCAGCTCCAATATGTAGCAGTCTCTCTGGATGGCGGAGAGTGAAGGAGACGGAGAAA  
CGCGCCCCATCCCTTCCGCCGCTCCTTTCCCCCCCCGACCTATTAGGTTTTAAGTCAAAAATGTGCATATGTC  
ATTATGCACTTTACAGATGAGGGGAGGGGCGCAGTGGCGAGAACCACCCACCCACCCAGTGCAGACTTCGGGG  
TCTCCACCCAGGCCAGCAGCGCCCACTGGGTACAGCAAGCCAACAGGTACAGAAGCCAACGAGGGGACTGTT  
TCTCTTCCACTCCTATCCTCTTTTCTTGAICTTTTTTTTGCATTTTCTTTCATTCTTTTAAACAGGAGAGCAAAG  
CTGTTTTAGCAGAGGCTGGGGCTGAGGTCCCCATGGGGTTTGGGTGCAGGGGCATGGCACCTTTCTGTGGGA  
AGGGAGAGGGGAATAACCCCCCAGCCTGCCCTCCGCCCGCCCCAGCGCGGACTGTGCTGTTTCTCCGCC  
CCACTCCCGTGTCTTCTGACCTCCTGCCTGAGTTGGGGTATTTATAGACTATTAATTTTCTGACTGAGCCAATA  
GTGGTTGGGGAACTCTTGAAAAAGGGGAGAGAATGGCTGGGTGCTGGGGAGTTCCCCCTCCGAGCCCTCCTTCC  
CGGCCAACCTGAGGGATGTGGATTGGGACTGTCTGGGGGCCCTCCTGCAGCGAGGATGGGAGGGGGTGTGA  
GCTGTGAATCCCCTGGGCAGGGGGCGACAACCTCCGTGTAGCATTAACCCCGTGGCGGGGTCCGCTGCTGGTCTA  
ATTGGACCCCTGCCTCTCAGTGGCCCTGCCCTAGGGGTGTCTGTCTCCAGAGGGGAGGGACAAATCCCCTACT  
GGGGCCATTTCATGAGGGTAGTTTTTGATTTTTTCCCCACTCACTTTTTATTTTTTAATGATAATGGAGATGT  
CTGGACCTTCTCACCCACCTGTGGTCTTGTCTGGCTCTGCCTGTCCCCACCGTTGTTCTCGTAGGTGAA  
CCCCAGGTCTCAACTCCCCCCTTTATGTGTTGAAAGTTAATGGTTTCAGATGTGAACATCACGTGTTATAACT  
GTAGCGCTGTAAATTTTTTTGTGGGAGGGTGGGCAGGGAGGGGTCCAGAGGGTAGAGCTCAAGGATTTTGGGT  
TTGTTTTGTTTTCATTTTTTCAAAAAAAGAAAAAATAGAAAAAAGGAGTAAAGGGGCGGGTTTGT  
TTTTGAAGAACTGTCTGGATACCTATTTAATGTGTGTTCTGTTTTGTTTTTAAAGATTTTTAAATAACGTCT  
GTGCCTCCACTGGTTGAGGGTGGAACTCCAGGCAGGAACCGGCTCGCCACCTCTGCCCGGTAAGGGCTGCCCA  
AGAAAGCATTACCCGCCCTCGGGGGGTGGGGCTGTGGGGTCCCGGCACCTGGCGTGAGTTTCATGTATGAAAC  
ATAAATTGAAAAAATAAAAAACCTACACGAGCACCGTGATTTCAAGTAATAAACAGAAAATGAAACAC

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**FIGURE 5118**

MSLAIHSTTGTRYDLAVPPDETVEGLRKRLSQRLKVPKERLALLHKDTRLSSGKLQEFVGVDGSKLTLVPTVEAG  
LMSQASRPEQSVMQALESLTETQPPAAPGPGRAGGGGFRKYRFILFKRPWHRQGPQSPERGGERPQVSDFLSGRS  
PLTLALRVGDHMMFVQLQLAAQHAPLQHRHVLAAAAAAAARGDPSIASPVSSPCRPFVSSAARVPPVPTSPSPAS  
PSPITAGSFRSHAASTTCPEQMDCSPTASSASPGASTTSTPGASPAPRSRKPGAVIESFVNHAPGVFSGTFSGT  
LHPNCQDSSGRPRRDIGTILQILNDLLSATRHYQGMPPSLAQLRCHAQCSFASPAPDLAPRTTSCEKLTAAPSAS  
LLQGQSQIRMCKPPGDRLRQTENRATRCKVERLQLLQKRLRRKARRDARGPYHWSPSRKAGRSDSSSSGGGGS  
PSEASGLGLDFEDSVWKPEVNPDIKSEFVVA

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**FIGURE 5119**

GAGGCTCGGGTCGTTGTGGTGCGCTGTCTTCCCGCTTGCGTCAGGGACCTGCCCGACTCAGTGGCCGCCATGGCA  
TCAGATGAAGGCAAACCTTTTGTGGAGGGCTGAGTTTTGACACCAATGAGCAGTCGCTGGAGCAGGTCTTCTCA  
AAGTACGGACAGATCTCTGAAGTGGTGGTTGTGAAAGACAGGGAGACCCAGAGATCTCGGGGATTGTTGGTTTGTG  
ACCTTTGAGAACATTGACGACGCTAAGGATGCCATGATGGCCATGAATGGGAAGTCTGTAGATGGACGGCAGATC  
CGAGTAGACCAGGCAGGCAAGTCGTCAGACAACCGATCCCGTGGGTACCGTGGTGGCTCTGCCGGGGGCCGGGGC  
TTCTTCCGTGGGGGCCGAGGACGGGGCCGTGGGTTCTCTAGAGGAGGAGGGGACCGAGGCTATGGGGGAACCGG  
TTCGAGTCCAGGAGTGGGGGCTACGGAGGCTCCAGAGACTACTATAGCAGCCGGAGTCAGAGTGGTGGCTACAGT  
GACCGGAGCTCGGGCGGGTCCTACAGAGACAGTTATGACAGTTACGCTACACACAACGAGTAAAAACCTTCTCTG  
CTCAAGATCGTCCTTCCAATGGCTGTGTGTTTAAAGATTGTGGGAGCTTCGCTGAACGTTAATGTGTAGTAAATG  
CACCTCCTTGTATTCCCACTTTCGTAGTCATTTTCGGTTCTGATCTTGTCAAACCCAGCCTGACCGCTTCTGACGC  
CGGGATGGCCCTCGTTACTAGACTTTTCTTTTAAAGGAAGTGCTGTTTTTTTTTGAGGGTTTTCAAAACATTTTGA  
AAAGCATTTACTTTTTTGACCACGAGCCATGAGTTTTCAAAAAAATCGGGGGTTGTGTGGGTTTTTGGTTTTTGT  
TTTAGTTTTTGGTTGCGTTGCCTTTTTTTTTTTAGTGGGGTTGGCCCCATGAAGTGGGTGCCCCACTCACTTCTC  
TGAGATCGAACGGACTGTGAATCCGCTCTTGTGCGGAAGCTGAGCAAGCTGTGGCTTTTTTCCAACTCCGTGTGA  
CGTTTTCTGAGTGTAGTGTGGTAGGACCCCGCGGGTGTGGCAGCAACTGCCCTGGAGCCCCAGCCCTGCGTCCA  
TCTGTGCTGTGCGCCCCACAGTAGACGTGCAGACGTCCCTGAGAGGTTCTTGAAGATGTTTATTTATATTGTCCT  
TTTTTACTGGAAGACGTACGCATACTCCATCGATGTTGTATTGTCAGTGGCTGAGGAATTCCTGTACGCAGTTTT  
CTTTGGCTTTACGAAGCCGATTAAAAGACCGTGTGAAATG



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**FIGURE 5120**

CCAAGATGGCGGTGCTGTCAGCTCCTGGCCTGCGCGGCTTCCGGATCCTTGGTCTGCGCTCCAGCGTGGGCCCCGG  
CTGTGCAGGCACGAGGTGTCCATCAGAGCGTGGCCACCGATGGCCCAAGCAGCACCCAGCCTGCCCTGCCAAAGG  
CCAGAGCCGTGGCTCCCAAACCCAGCAGCCGGGGCGAGTATGTGGTGGCCAAGCTGGATGACCTCGTCAACTGGG  
CCCGCCGGAGTTCTCTGTGGCCCATGACCTTCGGCCTGGCCTGCTGCGCCGTGGAGATGATGCACATGGCAGCAC  
CCCGCTACGACATGGACCGCTTTGGCGTGGTCTTCCGCGCCAGCCCGCGCCAGTCCGACGTCAATGATCGTGGCCG  
GCACACTCACCAACAAGATGGCCCCAGCGCTTCGCAAGGTCTACGACCAGATGCCGGAGCCGCGCTACGTGGTCT  
CCATGGGGAGCTGCGCCAACGGAGGAGGCTACTACCACTATTCTACTCGGTGGTGAGGGGCTGCGACCGCATCG  
TGCCCGTGGACATCTACATCCCAGGCTGCCCACCTACGGCCGAGGCCCTGCTCTACGGCATCCTGCAGCTGCAGA  
GGAAGATCAAGCGGGAGCGGAGGCTGCAGATCTGGTACCGCAGGTAGCGCCGCCGCCGCCGCCGCCGGAGCCTGT  
CGCCGTCTGTCCCCAGCCTGCTTGTGTCCCGTGAGGTTGTCAATAAACCTGCCCTCGGGCTGCCGCCAAAAAAA  
AA

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**FIGURE 5121**

MAVLSAPGLRGFRILGLRSSVGPAVQARGVHQSVATDGPSSSTQPALPKARAVAPKPSSRGEYVVAKLDDLNVNWAR  
RSSLWPMTFGLACCAVEMMHMAAPRYDMDRFGVVFRASPRQSDVMIVAGTLTNKMAPALRKVYDQMPEPRYVSM  
GSCANGGGYYHYSYSVVRGCDRIVPVDIYIPGCPPTAEALLYGILQLQRKIKRERRLQIWYRR

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**FIGURE 5122**

CCCCGGCCCAAGCCCCTGCAGGGAGCGGGCCCCGGCGCGCGATCGAGGTCGGGTGCGCGTCCAGCCTGCA  
GCATGAGCGCCCCCAGCGCGACCCCATCTTCGCGCCCGGCGAGAACTGCAGCCCCGCGTGGGGGGCGGCGCCCG  
CGGCCTACGACGCAGCGGACACGCACCTGCGCATCCTGGGCAAGCCGGTGATGGAGCGCTGGGAGACCCCTATA  
TGCACGCGCTGGCCGCCCGCCCTCCTCCAAAGGGGGCGGGTCTTGAGGTTGGGCTTTGGCATGGCCATCGCAG  
CGTCAAAGGTGCAGGAGGCGCCATTGATGAGCATTGGATCATCGAGTGCAATGACGGCGTCTTCCAGCGGCTCC  
GGGACTGGGCCCCACGGCAGACACACAAGGTCATCCCTTGAAAGGCCTGTGGGAGGATGTGGCACCCACCTGC  
CTGACGGTCACTTTGATGGGATCCTGTACGACACGTACCCACTCTCGGAGGAGACCTGGCACACACACCAGTTCA  
ACTTCATCAAGAACCACGCCTTTCGCCTGCTGAAGCCGGGGGGCGTCTCACCTACTGCAACCTCACCTCCTGGG  
GGGAGCTGATGAAGTCCAAGTACTCAGACATCACCATCATGTTTGAGGAGACGCAGGTGCCGCGCTGCTGGAGG  
CCGGCTTCCGGAGGGAGAACATCCGTACGGAGGTGATGGCGCTGGTCCCACCGGCCGACTGCCGCTACTACGCCT  
TCCCACAGATGATACGCCCCCTGGTGACCAAAGGCTGAGCCCCCACC CGCCCCGGCCACACCCATGCCCTCCTC  
CGTGCTTCTTGCGGGGAGTCCAGGGTGTGCGACCAGCCCTGGGCTGATCCCAGCTGTGTGTACCAGAAGCTT  
TCCCGGCTTCTGTGAGGGGTCCCACCAGCCAGGGCTGATCCCAGCTGTGTGTACCAGCAGCTTTCCAGCT  
TCTCTGTGAGGGTCACTGCTGCCACTGCAGGGTCCCTGAGGTGAAGTAAACGCCGCGCTGGGCTTGGCCAGTC  
GGCAGTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5123**

MSAPSATPIFAPGENCSPA WGAAPAA YDAADTHLRILGKPVMERWETPYMHALAAAASSKGRVLEVFGMAIAA  
SKVQEAPIDEHWIIECNDGVFQRLRDWAPRQTHKVIPLKGLWEDVAPTLPDGHFDGILYDTYPLSEETWHTHQFN  
FIKNHAFRLKPGGVLTYCNLT SWGELMKS KYS DITIMFEETQVPALLEAGFRRENIRTEVMALVPPADCRYAF  
PQMITPLVTKG

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**FIGURE 5124**

CCCCGGCCACAAAGCCCCCTGCAGGGAGCGGGCCCCGGGCGGCGCGCATCGAGGTCGGGTGCGCGTCCAGCCTGCA  
GCATGAGCGCCCCCAGCGCGACCCCCATCTTCGCGCCCGGCGAGAACTGCAGCCCCGCGTGGGGGGCGGCGCCCG  
CGGCCTACGACGCAGCGGACACGCACCTGCGCATCCTGGGCAAGCCGGTGATGGAGCGCTGGGAGACCCCTATA  
TGCACGCGCTGGCCGCCGCCCTCCTCCAAAAGGGGCGGGTCCTGGAGGTGGGCTTTGGCATGGCCATCGCAG  
CGTCAAAGGTGCAGGAGGCGCCATTGATGAGCATTGGATCATCGAGTGCAATGACGGCGTCTTCCAGCGGCTCC  
GGGACTGGGCCCCACGGCAGACACACAAGGTCAATCCCTTGAAAGGCCTGTGGGAGGATGTGGCACCCACCCTGC  
CTGACGGTCACTTTGATGGGATCCTGTACGACACGTACCCACTCTCGGAGGAGACCTGGCACACACACCAGTTCA  
ACTTCATCAAGAACCACGCCTTTCGCCTGCTGAAGCCGGGGGGCGTCCTCACCTACTGCAACCTCACCTCCTGGG  
GGGAGCTGATGAAGTCCAAGTACTCAGACATCACCATCATGTTTGAGGTGCGCCACCTGAAGTTCCCCATGGGT  
CTCCAGGAAGTGACCTTGGATGGGGGTGGGAAGGGGCTGCTGGAGCCACCTTGCTACCTGGGGAGGGTCCCTTCC  
TGACCCCTGGGTGGGCTGGACTGTGCTGGTTCAATTAAGAAATCAAAGTCCTTTGCCTGGCGCAGTGGCTGCCAG  
GAGCAGTGGCTCAGGTCTATAATCCCAGCACTGTGGAAGGCCGAGGTGGGCAGATTGCTTGAGCCTAGGAGTTCA  
AGACCAGCCTGGGCTACAGAGCAAGACCTCATCTTCTTCTAAAAAAAAAATACAAAAA

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**FIGURE 5125**

MSAPSATPIFAPGENCSPA WGAAPAAAYDAADTHLRILGKPVMERWETPYMHALAAAASSKGGRVLEVGFMAIAA  
SKVQEAPIDEHWIIECNDGVFQRLRDWAPRQTHKVIPLKGLWEDVAPTLPDGHFDGILYDTPLEETWHTHQFN  
FIKNHAFRLKPGGVLTTCNLTSWGELMKSYS DITIMFEVRPPEVPHGSPGSDLGWGWEGAAGATLLPGE GPFL  
TPWVGWTVLVHLEIKVLCLAQWLPGAVAQVYNPSTVEGRGGQIA

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**FIGURE 5126**

CTGCGCAGGCGCGGACCAAAGCGATCTCTTCTGAGGATCCGGCAAGATGGCAGAAGTAGAGCAGAAGAAGAAGCG  
GACCTTCCGCAAGTTCACCTACCGCGGCGTGGACCTCGACCAGCTGCTGGACATGTCCTACGAGCAGCTGATGCA  
GCTGTACAGTGCGCGCCAGCGGCGGCGGCTGAACCGGGGCCTGCGGCGGAAGCAGCACTCCCTGCTGAAGCGCCT  
GCGCAAGGCCAAGAAGGAGGCGCCGCCCATGGAGAAGCCGGAAGTGGTGAAGACGCACCTGCGGGACATGATCAT  
CCTACCCGAGATGGTGGGCAGCATGGTGGGCGTCTACAACGGCAAGACCTTCAACCAGGTGGAGATCAAGCCCGA  
GATGATCGGCCACTACCTGGGCGAGTTCTCCATCACCTACAAGCCCGTAAAGCATGGCCGGCCCGGCATCGGGGC  
CACCCACTCCTCCCGCTTCATCCCTCTCAAGTAATGGCTCAGCTAATAAAGGCGCACATGACTCC

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**FIGURE 5127**

MAVEQKKKRTFRKFTYRGVDLDQLLDMSYEQMLQLYSARQRRRLNRGLRRKQHSLLKRLRKAKKEAPPMEKPEV  
VKTHLRDMIILPEMVGSMVGVYNGKTFNQVEIKPEMIGHYLGEFSITYKPVKHGRPGIGATHSSRFIPLK



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**FIGURE 5128**

AGCATGCAGTTCCGGTCACCTGAGGGTGTCTGGGGCCGTGGTTTGAGCTTCATGGGCTCAGGTCCATGGCCGTTGAG  
TGTTGGCGAAACTGAGGCACGCTGTGCGGGGGACGGGGGGCGCTCACAGAAGGTAGGGGGCCCTCCTGTGCCTTCAT  
CCAGGCACTGCCCCGGCCTTTCCACCCTGTTGCTAAAGCAGGTGATGACAGAGGTGATTTGATCAGCCCAGACCC  
GTGCGGCACGTGGAGCCTTCGTCCGTGGGAGACCACACTGCCGAGGGGCAGGCCAGAGCCGAGGGGCCCCGTGACG  
CTTCTCTGAGTGACCTGAAGTCGGTGTGCTTCAGCCCTGCTGCACTGGGCTTGACATACGTGGGGGAGCAGGGA  
GCCATACGTAGTTTTCTGCTGAATGTGGGAGTCACCAGGACGTCAATGCCACCTCTCACCTTCGCCACCCCTGCC  
TCCCTAAGTGTGTGCTCCAGGAGGTTGCACGGCCCCCTGGAGAGGTTTTCGGTGGCGGGCTTGTTCGTCTCTGGC  
TTCCAGAGACAGCAGGAATGAGAGCCAGGCCAGCTCAGTGGAGTCCATCCCGGTGGGTGCCACGGCTTTTGCAGG  
AATGGAAGCCCCGCCCCAGGAGGGCCACTGCTGGCGAGGCTTGAGCTCTTCTGTGACCCGATCCCCCTGGTCA  
CACGCTTTGCTAAGGCGGGTAGCCTAGAGCTGGAAGCCCTCCTGCCACCCAGCCACTGTGCCTCTCCAGCTGA  
TGGACGAGGAAGCCTCCATTACTTGATTTTTGTTTTTATTATTTTGGAGACAGGGTCTCATTCTGTACCCAGG  
CTGGAGTACCGTGGCACGATCATAGCTTATTGCAGCCTCGGCCTCCAGTCTCAAGCGATCCTCCTGCCTCTGCC  
TCCAGAGAAGTAGGGACCACAGATGCGTGTCTACCACGCCAGCTAATTTTTGTATTTGTATTTTTGGTAGAGAT  
GGGGGTGTCTACTAIGTTGTCCAGGCTGGTCTCTAACTCTTGGGCTCAAGTGTTCTCCCGCCTCGGCCTCCCAA  
GTGCTGGATTACAGGCGTGAGCCACCACACCTGGCTGCATCCGTATGTTAAGAAGACCCCGGCTGGCAAGCTCA  
CTCGGGGACTGCAGGGAACCCTGCCCTTTGGGGGCAGTAGTGAGGGGTGCCAGGAGATGGGGTGGTCAGCAGG  
CAGTGATGCTGCTGTGTCTCTCAGACCCCCAGTTCCTTCAGGATGATGGAGGATGCGGAGGCCCCGGGAG  
AGCAGCTCTACCAGCAAAGCCGGGCCTACGTGGCTGCCAACCAGCGGCTGCAGCAGGCGGGCAACGTGCTGAGGC  
AGAGGTGTGAGCTCCTGCAGCGAGCCGGCGAGGACCTGGAGCGGGAGGTGGCCAGATGAAGCAGGCAGCATTAC  
CGGCAGCCGAGGCTGCCTCCTCAGGCTGACCTCTCGGGGCCTGCAGGCTTGGGCAGCGCACAAAGGTGGCCTGCAC  
CCAGGCTTTCCCTGGGGGTCCGTCCGCCCCAGACTGGCATTACGGGGTCCCAGCCACGTGGGTGTTGACACAG  
GCGCCCCCTCTGATGCTGGGGCTGCGGTTTCATCCGTCTCTCATTTCATGCCGAGTTGGTGGGACCCACCCAGCTG  
GCTCCGTCTCTGCTGACCTGAGGGCCCCACTGGGGTCTGGAAGAGGATAGGGACATTATTGCTGTACTGTGATT  
CTGTCTGTCAGCTCACAGTGGCCGTGCTCTGCAGTGGGGCCCCCTGGGAGCAGGTGCCACCTCCTTCCTCTCCCGG  
GCAGGCACTCGCCTGTCCACTTCTGAGTCCAGGTGTTGGGATCGAGGTGTTAACTGTGATTCCATCCAGCGAGTG  
CCCACCCAATGTGAGAGCAGCCCCGAGGGCCAGCCTGAGCCCTGACCCCACTTCCTTCTGGGCCCCGGGCTCCTC  
CCACAAGCCACGTTGATCTTCACAACGACCCTGGGCCGTGGGGTCACCCAAGAGAAGCAGCCCTGAGACCCAGC  
CAGGCTGGGCCTAGCTCCACGGCACGGGTGTCTCCAGCCACTGCCCTTGCTGGAGGACCGCTGTGAGTCACTGG  
CCAGGAGCCCAGGGTGTCTGAGTCTCATAGCCACCCTGCCAGCTGCAGCAGGTCTGGGCCTGCTTCCCTGCGG  
GTTCTGGCCCTGGGGGAGGGGGCGTTAGTGCGGCGGAGGGTCTTGCCAAAGGCTTTTCATCCTAAATAGCAACTT  
GAGTGGAAACCTGGGCAAGGCGGCCAGAGGCTGGGCCCTGCACATAAAGCTTTCGTGTGTGTC

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**FIGURE 5129**

MGSKAKKRVLLPTRPAPTVEQILEDVRGAPAEDEVFTILAPEDPPVFFRMEDAEAPGEQLYQQSRAYVAANQR  
LQQAGNVLQRCELLQRAGEDLEREVAQMKQAALPAAEAASSG

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**FIGURE 5130**

CGCGGGGAAACTGAGGCAGAGAGATGGGCTCCAAGGCAAAGAAGCGCGTGCTGCTGCCCACCCGCCCAGCGCCCC  
CCACGGTGGAGCAGATCCTGGAGGATGTGCGGGGTGCGCCGGCAGAGGATCCAGTGTTACCATCCTGGCCCCGG  
AAGGTAGGGGGAGCCCGGTCCCGGGGAAAAGCGGACCTGAGACCCGGCAGCAAGGGGACGGGAGAGAAGCACAC  
CCCTAACTCCTGACCCACGCCCTGGGAACCCCCGCAACATGGGCACGGTCCGTATCCTCTCCGAGTCTCCCTCT  
ACTCCTCCGTAGAGTGGGACCGATTTTCAGAGGGTTCTTCTGACAGGGGTGGAGGCCGGGCGCTGTGGTTCAGGC  
CTGTAAGCCCAGCACTTTCGGAGGATGAGGCGGGAGGATCGCTTGAGCCCAGGAGTTCGAGACCAGCCTGGCCAA  
CATGGTGAAACCCCGTCTCTGCTAAAAATGAAAAACAAAAAC

**FIGURE 5131**

[illegible]

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**FIGURE 5132A**

GCCTGAGGTGCCCGCCCTGGCCCCAGGAGAATGAACAGCCGCAGAGGATGGCGCCTGTGGGCACAGACAAGGAG  
CTCAGTGACCTCCTGGACTTCAGCATGATGTTCCCGCTGCCTGTACCAACGGGAAGGGCCCGCCCTCCCTG  
GCCGGGGCGCAGTTTCGGAGGTTTCAGGTCTTGAGGACCGGCCAGCTCAGGCTCCTGGGGCAGCGGCGACCAGAGC  
AGCTCCTCCTTTGACCCAGCCGACCTTCAGCGAGGGCACCCACTTCACTGAGTCGCACAGCAGCCTCTCTTCA  
TCCACATTCTTGGGACCGGGACTCGGAGGCAAGAGCGGTGAGCGGGGCGCCTATGCCTCCTTGGGAGAGACGCA  
GGCGTGGGCGGCTGACTCAGGCTGGCTTCCTGTGAGGCGAGCTGGCCCTCAACAGCCCCGGGCCCCGTGCCCT  
TCGGGCATGAAGGGACCTCCAGTACTACCCCTCCTACTCCGGCAGCTCCCGGCGGAGAGCGGCAGACGGCAGC  
CTAGACACGCAGCCCAAGAAGGTCCGGAAGGTCCCGCGGGTCTTCCATCCTCGGTGTACCCACCCAGCTCAGGT  
GAGGACTACGGCAGGGATGCCACCGCTACCCGTCCGCCAAGACCCCCAGCAGCACCTATCCCGCCCCCTTCTAC  
GTGGCAGATGGCAGCCTGCACCCCTCAGCCGAGCTCTGGAGTCCCCCGGGCCAGGCGGGCTTCGGGCCATGCTG  
GGTGGGGGCTCATCCCCGCTGCCCTCCCGCCCGTAGCGGCGCGGTGGGCAGCAGTGAAGCAGCAGCAGCTTT  
GGTGGCCTGCACACGACAGAGCGTATGGGCTACCAGCTGCATGGAGCAGAGGTGAACGTTGGGCTCCCATCTGCA  
TCTCCTTCTCCTCAGCCCCCGAGCCACGTACGGCGGCGTCTCCAGCCACACGCGCCTGTACGCGGGGCCGAC  
AGCCTCCTGGGCTCCCGAGGGACACAGCTGGCAGCTCCGGGGATGCCCTCGGCAAAGCACTGGCCTCGATCTAC  
TCCCCGATCACTCAAGCAATAACTTCTCGTCCAGCCCTTCTACCCCGTGGGCTCCCCCAGGGCCTGGCAGGA  
ACGTACAGTGGCCTCGAGCAGGAGCCCCGGTGCCTTATCGCCAGCTACGACGGGGGTCTCCACGGCCTGCAG  
AGTAAGATAGAAGACCACCTGGACGAGGCCATCCAGTGCTCCGCAGCCACGCGTGGGCACAGCCGGCGACATG  
CACACGCTGCTGCCTGGCCACGGGGCGCTGGCCTCAGGTTTACCGGCCCCATGTCACTGGGCGGGCGGCACGCA  
GGCCTGGTTGGAGGCAGCCACCCGAGGACGGCCTCGCAGGCAGCACCAGCCTCATGCACAACCACGCGGCCCTC  
CCAGCCAGCCAGGCACCCCTCCCTGACCTGTCTCGGCTCCCGACTCCTACAGTGGGCTAGGGCGAGCAGGTGCC  
ACGGCGGCCCGCCAGCGAGATCAAGCGGGAGGAGAAGGAGGACGAGGAGAACACGTACGCGGCTGACCACTCGGAG  
GAGGAGAAGAAGGAGCTGAAGGCCCCCCGGGCCCGGACCAGCCAGACGAGGACGAGGACGACCTTCTCCCCCA  
GAGCAGAAGGCCGAGCGGGAGAAGGAGCGCCGGGTGGCCAATAACGCCCGGAGCGGCTGCGGGTCCGTGACATC  
AACGAGGCCTTTAAGGAGCTGGGGCGCATGTGCCAAGTGCACCTCAACAGCGAGAAGCCCCAGACCAAACTGCTC  
ATCTGCACACAGGCTGTCTCGGTATCTCTGAAGTGGAGCAGCAAGTGCAGAGCGGAACCTGAATCCCAAAGCA  
GCCTGTTTGAACGGCGAGAAGAGGAAAAGGTGTGAGGTGTGGTTGGAGACCCCGAGATGGTGCTTTTCACTCCC  
CACCCAGGCCTGAGCGAAGCCACACACCCCGCCGGGCACATGTGAAGGTATGCCTCCGTGGGACGAGCCACCCG  
CTTTCAAGCCTGTGCTCTGGCCCCAGAACGGCCACTCGAGACCCCGGGCTTCATCCACATCCACACCTCACACAC  
CTGTTGTACAGCATCGAGCCAACACCAACCTGACAAGGTTTCGGAGTGATGGGGGCGGCCAAGGTGACACTGGGTCC  
AGGAGCTCCCTGGGGCCCTGGCCTACCACTCACTGGCCTCGCTCCCCCTGTCCCCGAATCTCAGCCACCGTGTCA  
CTCTGTGACCTGTCCCATGGATCCTGAACTGCATCTTGGCCCTGTTGCCTGGGCTGACAGGAGCATTTTTTTTT  
TTTCCAGTAAACAAAACCTGAAAGCAAGCAACAAAACATACTTTGTGAGAGAAGAAAAAATGCCTTAACATAT  
AAAAAGCGGAGAAATGGAACATATCACTCAAGGGGGATGCTGTGGAACCTGGCTTATTCTCTAAAGCCACCA  
GCAAAATTGTGCCTAAGCGAAATATTTTTTTAAGGAAAATAAAAACATTAGTTACAAGATTTTTTTTTTCTTAAT  
GTAGATGAAAATTAGCAAGGATGCTGCCTTTGGTCTCTGGTTTTTTTAAGCTTTTTTTGCATATGTTTTGTAAGC  
AACAAATTTTTTTGTATAAAAGTCCCGTGTCTCTCGTATTTCTGCTGCTGTCTAGACTGAGCATTGCATTTC  
TTGATCAACCAGATGATTAAACGTTGTATTAAGAACCCCGTGTAACCTGAGCCCCCGCTCCCCCCCCCCCC  
CCGGAAGCCACTGCACACAGACAGAACGGGGACAGGCGGCGGGTCTTTTGTTTTTTTGATGTTGGGGGTTCTCTT  
GGTTTTGTCTATGTGGAAGTGATGCGTGGGCGTTCCCTGATGAAGGCACCTTGGGGCTTCCTGCCGCATCCTCT  
CCCCCTCAGGAAGGGGACTGACCTGGGCTTGGGGGAAGGGACGTGAGCAAGGTGGCTCTGACCTCCCAGGTGACT  
CTGCCAAGCAGCTGTGGCCCCAGGGCTACCTACACAACGCCCTCCCAGGCCCCCTAAGCTGCTCTCCCTTG  
GAACCTGCACAGCTCTCTGAAATGGGGCATTTTGTGGGACCAAGTACCCTGGCATGGGGACCACACCCTGGAG  
CCCGGTGCTGGGGACCTCCTGGACACCTGTCTTCACTCCTTTGCCCGAGGACCCAGGCTCATGCTCTGAACT  
CTGGCTGAGAGGATGCTGCTCAGGAGCCAGCACAGGACACCCCCACCCACCCACCATGTCCTTACACCA  
GAGGGCCATCGTACGTAGACAGGATGCCAGGGGCTGGCCAGCCTCCCCAATGCTGGGGAGCATCCTGGGGC  
TGGGGCCACACCTGCTGCCCTCCCTCTGTGTGGTCCAAGGGCAAGAGTGGCTGGAGCCGGGGGACTGTGCTGGT  
TGAGCCCCACGAAGGCCTTGGGCTGTGCGTCCGACCTGCTGCAGAACCAGCAGGGTGTCCCTCGGGCCCATCT  
GTGTCCCATGTCCAGCACCCAGGCCTCTCTCAGGTCTCTTTTCTGGTCTTTTGCCATGAGGGTAACAGCTC

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**FIGURE 5132B**

TTCCCAGCTGGCTGGGGACTGICTTGGGTTTAAACTGCAAGTCTCCTACCCTGGGATCCCATCCAGTTCCACAC  
GAACTAGGGCAGTGGTCACTGTGGCACCCAGGTGTGGGCCTGGCTAGCTGGGGGCCTTCATGTGCCCTTCATGCC  
CCTCCCTGCATTGAGGCCTTGTGGACCCCTGGGCTGGCTGTGTTTCATCCCGCTGCAGGTGCGGCGTCTCCCCC  
GTGCCACTCCTGAGACTCCACCGTTACCCCCAGGAGATCCTGGACTGCCTGACTCCCCCTCCCCAGACTGGCTTG  
GGAGCCTGGGCCCCATGGTAGATGCAAGGGAAACCTCAAGGCCAGCTCAATGCCTGGTATCTGCCCCAGTCCAG  
GCCAGGCGGAGGGGAGGGGCTGTCCGGCTGCCTCTCCCTTCTCGGTGGCTTCCCCTACGCCCTGGGAGTTTGATC  
TCTTAAGGGAACCTTGCCTCTCCCTCTTGTGTTTGTCTCTGGCCCTGCCCCCTAGGTCTGGGTGGGCAGTGGCCCCAT  
AGCCTCTGGAACCTGTGCGTTCTGCATAGAATTCAAACGAGATTACCCAGCGCGAGGAGGAAGAAACAGCAGTTC  
CTGGGAACCACAATTATGGGGGGTGGGGGGTGTGATCTGAGTGCCTCAAGATGGTTTTTCAAAAAAATTTTTTAA  
AGAAAATAATTGTATACGTGTCAACACAGCTGGCTGGATGATTGGGACTTTAAAACGACCCTCTTTCAGGTGGAT  
TCAGAGACCTGTCTGTATATAACAGCACTGTAGCAATAAACGTGACATTTTATAACG

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**FIGURE 5133**

MNQPQRMAPVGTDKELSDLLDFSMFPLPVTNGKGRPASLAGAQFGGSGLED RPSSGSWGS GDQSSSFDPSRTF  
SEGTHTESHSSLSSTFLGPGLGGKSGERGAYASFGRDAGVGGLTQAGFLSGELALNSPGPLSPSGMKGTSQYY  
PSYSGSSRRRAADGSLDTQPKKVRKVPPGLPSSVYPPSSGEDYGRDATAYPSAKTPSSTYPAPFYVADGSLHPSA  
ELWSPPGQAGFGPMLGGGSSPLPLPPGSGPVGSSGSSSTFGGLHQHERMGYQLHGAEVNGLPSASSFSSAPGAT  
YGGVSSHTPPVSGADSLGSRGTTAGSSGDALGKALASIYSPDHSSNNFSSSPSTPVGSPQGLAGTSQWPRAGAP  
GALSPSYDGGLHGLQSKIEDHLDEAIHVLRSHAVGTAGDMHTLLPGHGALASGFTGPMSLGGRHAGLVGGSHPED  
GLAGSTSLMHNHAALPSQPGTLPDL SRPPDSYSGLGRAGATAAASEIKREEKEDEENTSAADHSEEEKKELKAPR  
ARTSPDEDEDDLLPPEQKAEREKERRVANNARERLRVRDINEAFKELGRMCQLHLNSEKPQTKLLILHQAVSVIL  
NLEQQVRERNLNPKAACLKRREEEKVSGVVGDPQMVLSAPHPGLSEAHNPAGHM

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**FIGURE 5134**

CAGCAACTCCGTGGCCAAGCTGAGGAGGCCAGGGCCCGCTCCTGCTTCTCCACGGGTGTGCTCTGTGGCCCCCG  
ATGGAAGGGGGAAGGATCCAAGCAGGCCCTCCCTGCCCAGGGCAGAAGATTCTGGAGTCTTGGGCGTTGCCTGTG  
AGTGTCTGAGAGATAAGGGCCCCGCCCCGCCCCGCCCCGACCAAGGTCTCGTCCCGTCCCTTGCTGCGCCGG  
GAACTCCTGCCCCACGCAGGCTTCTGGTCTCCACACTGGGCTTGTTCTTGGGTGATGAGATTGGGCTCCACCCTC  
ACGGGCTGCCAGCCTCCTGCCCGATGGGTGAGCCTCTGCTGCTCAGCAAAGGGCGGCCCCACTTCCCACAC  
TGGCAGGTGGGGACAGGGAGACCCTGGGCCTCCCCAGAGCTCATGGGTAGCTTCCACACCCTCATGCTGTCTAG  
AGCCTTTCTCACAGGGTCAGAAGAGTCTGCATCTGACACAGAGACCCAGTCCACATAGTCAGGGCTGGGCCAGA  
GGGAGGGACTTGGGGCTGATGGGGAGGAGGCTCGGCGTGAGAGTGAGGTCTTTGCCCAAGGAGGGTATGAAAGCT  
GGGGCTTTAGTGGGTGGGTAGGAGTTGGCCAGCAGAGAGCCGACGGAAGAGTTAATTTAAGTTTATGGACCTGTA  
AGTGCTCCGAGTCCCAGGGTGTCTGGGTGTTAGCTGCTGACTGGTGTCTCATGAGTCGGGCTGGGTGAGGCTGG  
GTTAGGAAGGGTTCCACAAGCCCCCGGGTCCACTGAGGTTTGCCCCCTGAGATGATGAACCGAAGCTTTTAGAGC  
TGGGCAGGCGTGAGGGTGACCCATAACTCTCTCTGCTCCTGCTGCTGAGGTCTTGAGGACCGGCCAGCTCAGGCTC  
CTGGGGCAGCGGCGACCAGAGCAGCTCCTCCTTTGACCCAGCCGGGTAGGAGTCCCCGTGAGGCCTGAGACCCT  
GAGTTTCTGTCCCCAGAGTTGGGGGCGAGGGGTGTGGGGAAACTGAGGCTGAGAGAAGGGGCCAGCCTTCCAGG  
GGTTTGACTGGGGACATGGGTTTGAGTCCTGCCTCTCCAGCTGTAATGCGGGGTGGAGGGGGGGCCTGTGAAG  
CCCCAGCACCTCTCATCCCCACCCATCTCCCCTAGACCTTCAGCGAGGGCACCCACTTCACTGAGTCGCACAGC  
AGCCTCTCTTCATCCACATTCTTGAGACCGGGACTCGGAGGTGAGTGCTGCGCTGGCTGGTGGGTCCCTCTGCTGTG  
CACAGATGTGCAGACGTGGGCCTTGCCATGGTCAGTGACGCACAGCGCCAGGCAAGTCCCCAGCGTTACCCAG  
AGGGTGTGGACAGCCGAAGCCTCTGCCCCTCCTGGGAGCAGCTGCGGGGAGGTGCAGGGGACGTGGCCCGGACTC  
CCTGGCACGGCAGCTCTGCAACTAGGCTTCCCCGCCTGAGCGTAGAGGCAGGGAGGCCGTTCCAGACCCCACTTCC  
TCCCTGGGATTTCTGCAGGGCTCCTCCTGCTTCCCGGGAGGGGTGAGCCGGGCTGGCCTGTGCCCCGCTGGGAAG  
GAGGCGTAGGAGTTCTGGAGACTCGGGAGGGCGGCCAGAGTGTGCGGTGGTCAGAGCCCATGCCCTTCCGCAGAC  
CGCCCGCCCCGCTCTTTCCCTGGGGGGCCCTCCTGTTAACCGAGAGAATCGTGAAGTCAAGTTGGGCTCGGTGGC  
TCACGCTGTAATACCAGCACTTTGGGAGAGCGAGGTGGGTGGATCACCTGAGGTGAGGAGTTGAGACCAGCCT  
GGCCAAATGGTGAAACCCCGCTTCTACCAAAAAACAAAAATTAGCCGGTCATGGTGTGGATGCTTATAGTGC  
CAACTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGTGGAGGCTGCAGTGAGCCGAGATCACGC  
CATTGCCCTCCAGCCTGGGTGATGGAGCGAGATTCCATCTT



[illegible]

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**FIGURE 5135B**

ACAAGCGGTCCCTGCGGAACCTCATGGCCGACTACCTCAGACAGATCATCCAGGACAATGTGGATGGGCACAGCT  
CCAGCGAGGACGCCGGCGCCTGCATGCACCTGGTGATCTGGAAGGTTTCGAGAAGACGCCAAGACCAAGCGATGAC  
GCCTGCCCCGCTCCACCCGCCTCTCCTGCCGTCCCGCTGGTCCTTAGCCCCATGCCTCTTCCAAAACAGTGCAA  
TAAATCTCCGGTAACCCGTCCACCTGGCCGAGGCAGCCAGAGCAGCGGGATGAGCTGGCGGCCAGAGAACGCC  
AGCCCAGCCCACCCCGCTCACGTCCTGCCGCACCCCTCCGCCGGTCCCCACCCCTCTGCCCCCAGCCCTCTGGC  
GTCTCTAGAAACTGCTGCTGATGGAGACCAGGACAGAGCCCCCCCCACCCGGCCCGCAGCCCCCTCTGCCCTC  
CTGCCAGGCCCTCCCTCCCGGGTGGTGGCCGGCACCTCTGCTCCTCACGTGGGTCGCGGGGCGGGCTTGTCCCAG  
GTTTGTTTGAGACAGTCTTTTTTTATTTTGTATTGTTATTTTTATTATTTTAAATTTAAACCTGATGACTTGAC  
AGCATCTTTCCACCGGAAGAGCGGGCCIGCTGCCTTCCCTCCTGCGGGGTGGGGGTGGGACAGACCCAGTGG  
GGGCCAGGGCCACACTCAGCGCAGTGTGGGCTGGACCCGCCTCTGTGCTCCAGGGGCTGGCCGGTCTTCGGGGC  
GCCGGCTTCCACCACTCGCCGCCCCACCCCTGCACTCCGTGACCTCTGAGAACCCAGCTGGCCCCCTCGTTAGCCC  
CAGGGTCTGCCGTCTAGAGGGAGCCACCGGCCTCCGGACACTGTCTTCCCGCTAGAGCCCCGTCTCTCTGCG  
GGGCTCTCCGGACCCCTTCCCCCTCACCTCCAGGCAGGGACAGAATAAATGTTTGTATGGATTTT

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**FIGURE 5136**

MLRSTGFFRAIDCPYWSGAPGGPCRRPYCHFRHRGARGSGAPGDGGEAPPAAGLGYDPYNPELPKPPAQRENGTL  
GLGEEPRPDVLELELVNQAIEAVRSEVELEQRRYRELLETTREHRSAPALAPRGPNASPTVGPDEDAFPLAFD  
YSPGSHGLLSPDAGYQPTPLAAPAEFGSKYSLASLDRGQGRGGGGGALEYVPKAVSQPRRHSRVPVSGKYVVDN  
SRPPTDLEYDPLSNYSARHLSRASSRDERAAKRPRGSRGSEPYTPAPKKLCDPFGSCDARFSDSEDEAATVPGNE  
PTTASTPKARADPEIKATGQPPSKEGLEAEGGGLRETKETAVQCVDGLQPPPAKPASPAQVQSSQDGGCPKEGK  
PKKKKTGAPPAPSCKDGAQGGKDKTKDKGRGRPEKPRADKKGPQASSPRRKAERPEGTKKKPSSATPVATSGKGR  
PDRPARRPSPTSGDSRPAAGRGPPRPLQLPDRKSTKAPSGKLVERKARSLDEGASQDAPKLKKRALSHADLFGDE  
SEDEAAGFGVPSVWPSALPSLSSDSDSDSSSLGFPEAQGPPKRLKASPPSPAPSSSSSSSSSTSSAGADVDS  
ALEKEVDFDSDPMEECLRIFNESTSVKTEDRGRLARQPPKEEKSEEKGLSGLTTLFPGQKRRISHLSKQGQEV  
PRRGPAVPPARPPTAQEVCYLRAQQAQRASASLLQAPARLAEKSPSVHISAPGEKRRIAHIPNPRLAAAPTGA  
TLAASGSQSSNGPEPGGQQLKTRTLSGMASKTTTTIIPKRIAHSPLQSLKKPIIPKEFGGKVP TVIRQRYLNL  
IEECLKFCTSNQEAIEKALNEEKVAYDRSPSKNIYLNVAVENTLKKLRGLAPSAVPGLSKTSGRRVVSHEVVLGGR  
LAAKTSFSLSRPSSPRVEDLKGAALYSRLREYLLTQDQLKENGYPFPHPERPGGAIIFTAEKRPKDSSCRTCCR  
CGTEYLVSSSGRCIRDEECYHWRGLRRNRVAGGWETQYMCCSAAAGSVGCQVAKQHVQDGRKERLEGFVKTFEK  
ELSGDTHPGIYALDCEMSYYTYGLELTRVTVDVHVVDYTFVKPDNEIVDYNTRFSGVTEADLADTSVTLRDV  
QAVLLSMFSADTILIGHSLESDLLALKVIHSTVVDTSVLFPHRLGLPYKRSLRNLADYLRQIIQDNVDGHSSE  
DAGACMHLVIWKVREDAKTKR

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**FIGURE 5137**

TGCAACGGGGCCCCCAGGGCAGCTAGGAGGTCTCCCTCTCCTCTCCACCACCCCTGCTGCCCCCTCCCG  
GGGTGGGGTTTGGGGGGGTGGAGTGGACTTCTGGGAGCCGGCCCGGGGAAAGCACCCCTGCCCCATCCCTGCAG  
ATTGGGATGAAGTGTTTCAGACAGCCATAGAGGAGTCGGGGGTTCAGACGGCCCTGCCTCTCCCCACCCACCCC  
CACCCACCGAAAGCCATGGGAGTAGTTTCAGGGAAATGGGGGTGCAGCCCAGCCACCCCATTCGGGTACTCAA  
TCTCAGGTGTCCACAAGTTCTGCGCACGGTAGGGGCTGCCTGGCCCCCAGACCTCGGGGGTAGAGCCAGGAGTG  
GGCAGCGTTAGGATGCCCCGAGGGGCTCCAGGTGTTGCTTCTGAGACCTGGGATGGGGAGGGAGGGGACCTCTG  
GGTTCTTCCAAAGAACATTGACTCAGTGGGGTCGGGAGGGAATCCTGGCTTATTTATTTTCTCTGTCTCGGG  
TGTGGGGGCCCTAGCTCGCCCTCTCTGGGTGGGTGAGAGAGGCTGCAGGGGAGGCTGGCACCAGGGCTTGGG  
CCTCCAGTCCCTGCCTTGCTGACTTTGGCCGTTGCGGTATCACGTGACAATCAACTCTCCCTTAACGACGACTGC  
GGCTGTTGGGCTGCGCTGCCCTCCCTGGCCTGCAGGTGGGGCCGTGGAGCCCATGCCCGCCGGGGTTGCAGGCTC  
TTCCGGGCCTGGGCTGCAGCCTGGCCCCGGCCCTGCTTCCCTGGCCTCCCTCTCTCTCTGGGTGCTTGGAAGAG  
GTGGGTCTGGCCCCGTGGTTGAGGTCTTGCCCTCGTGGACTGGAAGCAGAGGGCTGGCTGTGCAGCCTCCTGGGGT  
AGCTCGTTTTTTTTTGACCCGGGTAGAATATTTTTTCAGGCACGGATTCTTTTTTCTGGGCCCCCATGGGTGGT  
CCGGCATCCTCAGGGGGTGTGAGTGTGTGTGGGGGTCTCTGAGCTGAACTTGGGTGGGGTGGGGACTTGTTCCT  
CGGGGGCCACCTTTGTGTCTTGTTCAGCGGTCTCTGCTGTGGCCTGGGTGTCATTTCCTCTTGGGGGGGTAT  
TGAGGACCCCGAGCCTGGAATGAGAAGGGTCCCCGGTTCCATGTCAGACCCAGAAAGGTGGATCCCCCACTGTT  
GGCTGCAGGAGGTTTTTGGTACCCCTTTTGTTCAGAACCGTCTGCTCTCGCTTGGGGACAGGGGGGCTTTG  
GATGGCAGTGGTGTGCACCTGGACCCAGCCCCGGCCTGGCAGGATCCAGGGATGGGTGCTTGGGATCCTGGGGG  
AGGGAGGCAGGGGACGCCCTTCTGGAGCTGGGCTCGGAGGGTCTGCCCCATCCAGCCCTCGGCTCTCTGTGTTT  
TCTGTCCCTAGCCTCAAACCTCTTCTGGCAGCGCTAGTGAGATGCCTTAGTCTGTGGGGGTGGGTGGGGGACTG  
GGGCCCCGTTTTCTTTGTGAGTCTTGGTTGGCCCCAGCCCTGGCAGGGGCTGTCTGGAGCAGGGGTAGGTAGG  
GCTGTGGGTTCAGAACTCTATAACTGGGCCCCCTCTCCAGTGTCCAGGGGCTTGGAGAGACCTGCGCCCAACCCT  
CCACTCTCCAGGAGTCGCTGATCACTGGGACCTGGTTCCAGCCGTTTGAGGGGAGGCGGCTCCGAGAGGCGTG  
TGCTTTCCGTGGGTGGCGCCCTCCCCCGCCCTGCCTGGCCTCATCCTTGTATTTAATTAATTAACAAGCCCCT  
TTTTAAACCCT

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**FIGURE 5138**

GCGGAGGGACCGACGGACGCACGGGCGGGCGGCCGGGAGCCATGGAGCGCGGCCCTGGGGCCCCGGGGCGCGGGC  
CGGGGTGGGCTTCCCACGGCACGACATGGAGACCTGTGGTTGCGAGGCTCCCTGGGGCTCGGCTTGGACCGCGAT  
GGGGCTGGGCCCTGGCCTCCTAACGGGGCTGCTGTCTGGGGCGGTAGCTGGGGGGGCGCTCTCCCCCTGCCCGC  
GACTCGGAGCACCCCCACCCCTCCCTGCCGGGCCAGGCCGGGCGCGTTGTTGGCGGGGGCCCCGGTGGAGGCC  
CGGCCTGGGCGGCGCCCGCCATGAATGGGCTGTCGCTGAGTGAGCTCTGCTGCCTCTTCTGCTGCCCGCCCTGCC  
CCGGCCGCATCGCTGCCAAGCTCGCCTTCTGCCGCCGGAGGCCACCTACTCCCTGGTGCCTGAGCCCCGAGCCGG  
GGCCTGGTGGGGCCGGGGCCGCCCTTGGGGACCTGAGAGCCTCCTCGGGCGCACCCGGGCGCTGGAAGCTGC  
ACCTGACGGAGCGTGCCGACTTCCAGTACAGCCAGCGCGAGCTGGACACCATCGAGGTCTTCCCCACCAAGAGCG  
CCCCGGCAACCGCTCTCCTGCATGTATGTTTCGCTGCGTGCCTGGTGCCAGACAAGGACACCAGGCTCAGGGAG  
GCCATCCCCAGCTGGCATGGGTGGGCAGGCTGGGCGACTCCAACAACCCAGCGCCTGGTGGTTGCCTGCTGGGGC  
AGAGCTGGGGCACAGGGGCTGCCCTGGCCTGCGGGTACATCCACCTTCTCGCCAGGTACACGGTCTCTTCTCGC  
ACGGCAATGCCGTGGACCTGGGCCAGATGAGCAGCTTCTACATTGGCCTGGGCTCCCGCCTCCACTGCAACATCT  
TCTCTACGACTACTCCGGCTACGGTGCCAGCTCGGGCAGGCCTTCCGAGAGGAACCTCTATGCCGACATCGACG  
CCGCCTGGCAGGCCCTGCGCACCCAGGTACGGCATCAGCCCGGACAGCATCATCCTGTACGGGCAGAGCATCGGCA  
CGGTGCCCACCGTGGACCTGGCCTCGCGCTACGAGTGTGCCGCGGTGGTGCTGCACTCGCCGCTCACCTCGGGCA  
TGCGCGTTCGCTTCCCCGACACCAAGAAGACCTACTGCTTCGACGCCTTCCCTAACATCGAGAAGGTGTCCAAGA  
TCACGTCTCCCGTGTCTCATCATCCACGGCACGGAGGACGAGGTGATCGACTTCTCGCACGGGCTGGCGCTCTACG  
AGCGCTGCCCCAAGGCGGTGGAGCCGCTGTGGGTGGAGGGCGCCGGGCACAACGACATCGAGCTCTACAGCCAGT  
ACCTGGAGCGCCTGCGTTCGCTTCTATCTCCAGGAGCTGCCCAGCCAGCGCGCTTAGCGGGCGGCCCAACCGGCCG  
GACCTCAGCAATAAGGCGGCCCCCGGACCTACCCCGCGCCGGCCCCCACCAGGGGCTGCATGTGGACCCCCCG  
GGCGGCCAGGGGACCCCGCCCCGACCCAGGGGCTGTGGACGATGTACAGGCAACAGAGCTACGCACTCCTTTCC  
TTTGGAAGCAAGAAGAAAATACGTGAAAACGGAATTAAGATTTAAATTTTAAAAAAAAAAAAAAAAA

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**FIGURE 5139**

MNGLSLSELCCFLCCPPCPGRIAAKLAFLPPEATYSLVPEPEPGPGGAGAAPLGTLRASSGAPGRWKLHLTERAD  
FQYSQRELDTIEVFPTKSARGNRVSCMYVRCVPGARQGHQAQGGHPQLAWVGRLGDSNNPAPGGCLLGESWGTGA  
ALACGYIHLLARYTVLFSHGNAVDLGQMSSFYIGLSRLHCNIFSYDYSYGASSGRPSEPNLYADIDAAWQALR  
TRYGISPDSSIILYGQSIGTVPTVDLASRYECAAVVLHSPLTSGMRVAFPDTKKTYCFDAFPNIEKVSKITSPVLI  
IHGTEDEVIDFSHGLALYERCPKAVEPLWVEGAGHNDIELYSQYLERLRRFISQELPSQRA

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**FIGURE 5140**

ATGAATGGGCTGTCGCTGAGTGAGCTCTGCTGCCTCTTCTGCTGCCCCGCCCTGCCCCGGCCGCATCGCTGCCAAG  
CTCGCCTTCTGCCGCCGGAGGCCACCTACTCCCTGGTGCCTGAGCCCGAGCCGGGGCCTGGTGGGGCCGGGGCC  
GCCCCCTTGGGGACCCTGAGAGCCTCCTCGGGCGCACCCGGGCGCTGGAAGCTGCACCTGACGGAGCGTGCCGAC  
TTCCAGTACAGCCAGCGCGAGCTGGACACCATCGAGGTCTTCCCCACCAAGAGCGCCCGCGGCAACCGCGTCTCC  
TGCAATGTATGTTGCTGCGTGCCTGGTGCCAGGTACACGGTCTTCTCGCACGGCAATGCCGTGGACCTGGGC  
CAGATGAGCAGCTTCTACATTGGCCTGGGCTCCCGCCTCCACTGCAACATCTTCTCCTACGACTACTCCGGCTAC  
GGTGCCAGCTCGGGCAGGCCTTCCGAGAGGAACCTCTATGCCGACATCGACGCCGCTGGCAGGCCCTGCGCACC  
AGGTGA

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FIGURE 5141

GGGATTTGCACGGCAGCAGAGTCACCGTGGAGAGGCCAGGGTATCACAACTTATCGGATTTTGACAAGAAAGGAG  
GGAAAGGGGAGACGGAGGAGGGCCGGAGAATGTCCAAGGCCGGGGGGCCGGAGCAGCCACGGCATCCGGAGCT  
CGGGGACCAGCTCGGGGGTCTGATGGTGGGCCCCAACTTCCGCGTCGGCAAGAAGATCGGCTGCGGCAACTTCG  
GGGAGCTCCGCCTAGGAAAGAATCTCTATACAAATGAATACGTGGCTATCAAATTGGAGCCGATCAAGTCCCGGG  
CCCCGCAGCTGCACCTGGAGTACCGGTTCTACAAGCAGCTCAGCGCCACAGAGGGCGTCCCTCAGGTCTACTACT  
TCGGTCCGTGCGGGAATTACAACGCCATGGTGTGAGCTGCTGGGGCCAGCCTGGAGGACCTGTTGACCTGT  
GCGACCGGACCTTCAGCTCAAGACGGTGTGATGATCGCCATCCAGCTGATCACGCGCATGGAGTATGTGCACA  
CCAAGAGCCTAATCTACCGGGACGTGAAGCCCCGAGAATTTCTGGTGGGCGCGCCGGGGACCAAGCGGCAGCATG  
CCATCCACATCATCGACTTCGGGCTGGCCAAGGAGTACATCGACCCCGAGACCAAGAAGCACATCCCGTACCGCG  
AGCACAAAGAGCCTGACGGGCACGGCGCGCTACATGAGCATCAACACGCACCTGGGCAAGGAGCAGAGCCGCCGCG  
ACGACCTGGAGGCGCTGGGCCACATGTTTATGTACTTCTGCGCGGCAGCCTCCCTGGCAGGGGCTCAAGGCCG  
ACACGCTCAAGGAGCGGTACCAGAAGATCGGGGACACCAAACGCGCCACGCCCATCGAGGTGCTCTGCGAGA  
TCCAGAGGAGATGGCCACGTACCTGCGCTATGTGCGGCGCTGGACTTCTTCGAGAAGCCCGACTATGACTACC  
TGCGGAAGCTCTTCACCGACCTCTTCGACCGCAGTGGCTTCGTGTTGACTATGAGTACGACTGGGCGGGGAAGC  
CCCTGCCGACCCCCATCGGCACCGTCCACACCGACCTGCCCTCCAGCCTCAGCTCCGGGACAAAACCCAGCCGC  
ACAGCAAAAACAGGCGTTGAACTCCACCAACGGGGAGCTGAATGCGGACGACCCACGGCCGGCCACTCCAACG  
CCCGATCACAGCGCCTGCAGAGGTGGAGTGGCCGATGAAACCAATGCTGCTGTTTCTTCAAGAGGAGAAAGA  
GAAAATCGCTGCAGCGACACAAGTCACCTGGGCGCGTGCAGCCCCCTGAATCTTCTCCGTGCAGCCCCCTGGGG  
CGCGACCTTGTGCGAGGCCCTCGGGGCCACCCACAGCGGCCAGGGCCAGACCCTGGCTGGAAGCCAGAACGCA  
GACTGCAGGGGCGCGCTGGCTCAGGCGGCCACCCCGGGACGTGGGGTCACTTCCTTCATGTAAGACTTTG  
GCCGAAATTTCTACACCTGTGTCTAGTCTCCCTCCAAGAGCATTAATATTTAAACAAGGAAAAGAGGAAAA  
AAAAACAGAGGCCCGCCCTACCCCACTCCTGCCCTCCGTTTCTTGTGAAGTGAGTAGTGTGATCCTGGAGG  
CCCCCGGCCCTGGCCCCGCCCGCCAGCGCCCCCGTTAGCGTCATAAAGTCCAGCTTGTCTCCCTCGATCCAAA  
GGCCGTTTTCTCGAGGGGAGGGCAGGCCCGGCCCTGGAGGGTGTGTGGAGCTGTCTTGCCAGGCCCTCCTGGG  
AGGGGACAGGCATTGTTGCCAGGGGTGAGGCCGTGCCCGAGCCTCCCCGAAACCAAGGGGAAGGCAGGGGTG  
GGGCCGTGGCTGAAGCCGGCTCCCCAACCAAAATGCTGCACCAAAGCTCGGGCGCCGGGCACGGCTGCTGCAG  
TCTCTTCCAGCCTGGCCCTGGCAAGGGGCGGGTGGGCGCTGCCAGGCGGGTGTCTCGACGCACTTGCTCCCG  
GAGGCTGCGCCCCGGCGCCTGGAACCCGAGGTGGAGGACCGTTGGTGTACCTGCTCGGCCCTCAGCCCTGC  
CGCGTGGGGCGCGTGGGCACGGAGCTTCTGCCTCTGCTCCGACACCCGGCAAGCAGCCGGAGACAAAACGCCTT  
AAAGCCCCCGGCCAGCCCTGCAGGTATATTGCAGGGGCTGGGGCGGCCCTGGACTGGCGGGCGGTTCCCCAG  
TGGGGTGCCTGGAGGCTGCCGGGCAGAGTGGAGCAGCTTGGGGCGGTGCCAGGGCGGTGGCTGTGAGTCTAGT  
TTTTGCTTTACCAAGTGTACAGAAATGGCATTACGTTTCTCTGATGCTCCCTGAAGCCATAGAAATTTAGGGG  
TTTTTTAAAAAATAAAAGAAAAATGAAACCAAAAAAAAAAAAAA



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**FIGURE 5142**

MDFDKKGGKGETEEGRMSKAGGGRSSHGIRSSGTSSGVLNVGPNFRVGKKIGCGNFGELRLGKNLYTNEYVAIK  
LEPIKSRAPQLHLEYRFYKQLSATEGVPQVYFPGPCGNYNAMVLELLGPSLEDLFDLDCDRTFTLKTVLMIAIQLI  
TRMEYVHTKSLIYRDVKPENFLVGRPGTKRQHAIHIIDFGLAKEYIDPETKKHIPYREHKSLTGTARYMSINTHL  
GKEQSRDDLEALGHMFMYFLRGSLPWQGLKADTLKERYQKIGDTKRATPIEVLNENFPEEMATYLRVRRDFF  
EKPDDYLRKLFTDLFDRSGFVFDYEDWAGKPLPTPIGTVHTDLPSQPQLRDKTQPHSKNQALNSTNGELNADD  
PTAGHSNAPITAPAEVEVADETKCCCFKRRKRKSLQRHK

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**FIGURE 5143**

ATGGCGGCGGGTGGGAGCGGCGGGCGTGCGTCGTGCCCCGCGGGGTGCGGGTGGCCCCGGGCACGGGGGGCAGT  
CCCCGGGCCAGCGCCAACGCGCGCGCCACCCCGGCCCCCGGCAACGCGGCCCGCCGCGCGCCGCCCGCCGCC  
GCGCGCGCGCCCTGGGCGGACGCGCGCCCGCCCGGGGCCCCGGGACAGACGCGCAGGCCCGGGGCGGGAG  
CGGGCGGAGGAGGCGGCGGGCCCGGGGCGCGGGCGCTGCAGCGCAGGCCGCGTACAACCTGGCAGGCCAGCAAG  
CCCACCGTGCAGGAGCGCTTCGCCTTCCTCTTCAACAACGAGGTGCTGTGCGACGTGCACTTCCTGGTGGGCAAG  
GGGCTCAGCTCGCAGCGCATCCCCGCGCACAGGTTTCGTGCTGGCCGTGGGCAGCGCCGTCTTTGATGCCATGTTT  
AACGGGGGAATGGCCACAACATCCACGGAGATTGAGCTGCCGACGTGGAACCCGCGCCTTCCTCGCACTGCTC  
AAGTTTCTCTACTCGGACGAGGTGCAGATTGGCCCCGAGACGGTGATGACCACGCTATACACCGCCAAGAAGTAC  
GCGGTGCCAGCGCTCGAGGCCATTGCGTGGAGTTCTGAAGAAGAACCTGCGAGCCGACAACGCCTTCATGCTG  
CTCACGACGGCGCGACTCTTCGATGAACCGCAGCTGGCCAGCTGTGCTGGAGAACATCGACAAAAACACTGCA  
GACGCCATCACCGCGGAGGGCTTCACCGACATTGACCTGGACACGCTGGTGGCTGTCTGGAGCGCGACACACTG  
GGCATCCGTGAGGTGCGGTGTTCAATGCCGTGTCCGCTGCTCCGAGGCCGAGTGTACGCGGCAGCAGCTGCAG  
GTGACGCCAGAGAACAGGCGGAAGGTTCTGGGCAAGGCCCTGGGCCTCATTGCTTCCCGCTCATGACCATCGAG  
GAGTTTCGTGCGAGGTCCCGCACAGTCGGGCATCCTGGTGGACCGCGAGGTGGTCAGCCTCTTCTGCACTTCACC  
GTCAACCCCAAGCCACGAGTGGAGTTTATTGACCGGCCCCGCTGCTGCTGCGTGGGAAGGAGTGCAGCATCAAC  
CGCTTCCAGCAGGTGGAGAGTTCGCTGGGGCTACAGCGGGACCACTGACCGCATCAGGTTCTCAGTCAACAAGCGC  
ATCTTCGTGGTGGGATTGGGCTGTATGGATCCATCCACGGGCCACCGACTACCAAGTGAACATCCAGATTATT  
CACACCGATAGCAACACCGTCTTGGGCCAGAACGACACGGGCTTCAGCTGCGACGGCTCAGCCAGCACCTTCCGC  
GTCATGTTCAAGGAGCCGTTGGAGGTGCTGCCAACGTCAACTACAGGCCCTGTGCCACGCTCAAGGGCCCAGAC  
TCCCACTACGGCACCAAGGCCCTGCGCAAGGTGACACACGAGTCGCCCCACCGGGCGCAAGACCTGCTTCACC  
TTTTGCTACGCGCGCGGGAACAACAATGGCACATCCGTGGAGGACGGCCAGATCCCCGAGGTCTCTTCTACACC  
TAGGCTGCCCCGACACCGACACCGCCCTCCCTCCGCGGGGATAGCCGACGCCCCAGGCCATCATCTGCTGCTGGG  
TCCCCCACCACGCGGTGCCAGGCCAGTGTCCCCAGGCCGTCTGTCCACTCCATGCCACCTTTCTCAGCATCA  
GGACGGGGTTGCCCTGTGTTACACAGAGTGTGGCTGCTGGATCAGGGCAGCCGGGAGGTGGCCAGGCCAGTGG  
CCAGGCCCTGTGGAGACAATCCCTCAGGACTAGGGACAGGGCTGTGCCGGCTGGGCCAGGGCCACGGACCCGC  
AGCTCAGGGCGCCTGCCACGTCGTCTGCCGCGGTGCGCCGCGGGCGTCCCTCGCGTCTCTTCACTGCACATTG  
CAATGCATTGCGATTCCCATTTCTCTGCTAGGAGCCAGCCTGGGTGGCGCTGCTCCAGAGCCGTGGGTCCCAG  
ACCTTGCGTTCTTTTGTCTGTCGTTTATCAGGACACGGGCCCCACCTGTCAGTGCCCGAGGCCACCCAAG  
CCCAGCCTGCGGGGCGTTCCCACTGCTGGATGCCGCTTGAGTTCTGCGCACGCAGGATTAGTGTGGGGACGG  
CCCCTGCCGATAGGCCTAGCCCTGGCCCAGGTGGTGAGCGGTTTGCAGTGTCCGTTCTCATCCACCTGATGGGC  
CCAGATAAAGGCCCCCGCTGTCCAGCCTCCCTGGACGGCCCTCGCGGTCCCTGCAGCCCAAGATGGGACTCAGAC  
CCTGTGCCCCAGAGCTCCCTGCGCAGAATGGGGCCCCAGCCGGCCCCGACCGGGTCCAGGAGCACTGCTCGCC  
TGTAATACTGTTGCCCTAGCCACCTGGTGCCGTGGGAGCCACCCCGAGGTGCTGGGGGCACAGCCCTCCCCA  
CTCCGGCCACGCCCCACCCACCCGCGTGTTCGCTGTGACTCCTGGAACCTGCGTCTCTCCCAAAGCCAT  
GGGAGGGGTGCTCTCTCAGACCATGCCCCAGATGATTTTTTAAATAAAGAAACAAATGCACCTGCAAAAAA  
AAAAATAGAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5144**

MAAGSGGRASCPPGVGVPGTGGSPGPSANAAATPAPGNAAAAAAAAAAAAAPGPTPPAPPGPGTDAQAAGAE  
RAEEAAGPGAAALQREAYNWQASKPTVQERFAFLFNNEVLCDVHFLVGKGLSSQRIPAHRFVLAVGSAVFDAMF  
NGGMATTSTEIELPDVEPA AFLALLKFLYSDEVQIGPETVMTTLYTAKKYAVPALEAHCVEFLKKNLRADNAFML  
LTQARLFDEPQLASLCLENIDKNTADAITAEGFTDIDLDTLVAVLERDTLGIREVRLFNNAVVRWSEAEQRRQLQ  
VTPENRRKVLGKALGLIRFPLMTIEEFAAGPAQSGILVDREVVSFLHFTVNP KPRVEFIDRPRCCLRGKECSIN  
RFQQVESRWGYSGTSDRIRFSVNKRIFVVGFGLYGSIHGPTDYQVNIQIIHTDSNTVLGQNDTGFSCDGSASTFR  
VMFKEPVEVLPNVNYTACATLKGPDSHYGTKGLRKVTHESPTTGAKTCFTFCYAAGNNNGTSVEDGQIPEVIFYT

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**FIGURE 5145**

TATTTATAAACACACTCACAGGGCCAGATTTGGGCCACGGGCCATAGTTGCCAGCCCGGCTTTAACTGCTGGTCC  
TCACGTTAGTCTCACTGCCTCCTGCAGGGTGGGCATGTGGGTGTCGTGTTACGCAGCCCCCTTCCTCCACCCCAC  
AGACACGCTGGTGGCTGTCCTGGAGCGCGACACACTGGGCATCCGTGAGGTGCGGCTGTTCAATGCCGTTGTCCG  
CTGGTCCGAGGCCGAGTGTCAGCGGCAGCAGCTGCAGGTGACGCCAGAGAACAGGCGGAAGGTTCTGGGCAAGGC  
CCTGGGCCTCAITCGCTTCCCGCTCATGACCATCGAGGAGTTGCTGTCAGGTAACAGAGCTCGGGCTCAGGGGCT  
GGTTTGGGAGGGGAGTGGCACACAGGTGGGCATCTGGGTACCGAGGATAGTGCCCCGAGTTCACTGCGGAAAGC  
CTGGCAGATGCCTGGCATATACAGATAGGAAGAAACCTGGCTTGTGAGGACGCGTCCACAGGGCCATCTGTTAGC  
CCCGCCCCGGCTCTGTCCCCACCGTGCACACTGCCAGACCCCGCCTCTCGTGTCTGTCCAGCTGTTTTGGTGGCA  
TCTTCCCAGGAGGGAAGGGAGTCCCGTCTCGCGCCCTTGTGCTACCTGCTGGTGCAGGTACCAGTGTCTGTGAC  
GAGCTCAGGAGGGCTCTGACATGGCCGGGGTGGCTGTGTCGCCCCGAGTGGGCCTTGGGGTCCCCTGTGTCAGG  
GCCTGGGTTCCAGGGTGACGTGAAGGGGCAGCGCTAACGATGCCTCCTGCCCTCGTGGCTGCTCACTGCCTGACG  
CCATCCAGCTCTGGAGCAAAACAGGCCTGGAACCTTCCAGAAGGGGCTGGGACAGAGCCCTGGGGCTGGTGCACA  
CTCGCCGTCTGGCCTTCCCCAGGTCCACGCGGCC

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**FIGURE 5146**

GCTGGCGGGGCCCGGACAGAAGATGGTGCAGAAGAAACCAGCCGAAC TTCAGGGTTTCCACCGTTTCGTTCAAGGG  
GCAGAACCCCTTCGAGCTGGCCTTCTCCCTAGACCAGCCCGACCACGGAGACTCTGACTTTGGCCTGCAGTGCTC  
AGCCCGCCCTGACATGCCCGCCAGCCAGCCCATTTGACATCCCGGACGCCAAGAAGAGGGGGCAAGAAGAAGAAGCG  
CGGCCGGGCCACCGACAGCTTCTCGGGCAGGTTTGAAGACGTCTACCAGCTGCAGGAAGATGTGCTGGGGGAGGG  
CGCTCATGCCCGAGTGCAGACCTGCATCAACCTGATCACCAGCCAGGAGTACGCCGTCAAGATCATTGAGAAGCA  
GCCAGGCCACATTCGGAGCAGGGTTTTTCAGGGAGGTGGAGATGCTGTACCAGTGCCAGGGACACAGGAACGTCCT  
AGAGCTGATTGAGTTCTTCGAGGAGGAGGACCGCTTCTACCTGGTGTTTGAGAAGATGCGGGGAGGCTCCATCCT  
GAGCCACATCCACAAGCGCCGGCACTTCAACGAGCTGGAGGCCAGCGTGGTGGTGCAGGACGTGCCAGCGCCTT  
GGACTTTCTGCATAACAAAGGCATCGCCACAGGGACCTAAAGCCGGAACATCCTCTGTGAGACCCCCAACCA  
GGTCTCCCCCGTGAAGATCTGTGACTTCGACCTGGGCAGCGGCATCAAACCTAACGGGGACTGCTCCCCATCTC  
CACCCCGAGCTGCTCACTCCGTGCGGCTCGGCGGAGTACATGGCCCCGGAGTTAGTGGAGGCCTTCAGCGAGGA  
GGCTAGCATCTACGACAAGCGCTGCGACCTGTGGAGCCTGGGCGTCATCTTGTATATCCTACTCAGCGGCTACCC  
GCCCTTCGTGGGCGCTGTGGCAGCGACTGCGGCTGGGACCGCGGCGAGGCCTGCCCTGCCTGCCAGAACATGCT  
GTTTGAGAGCATCCAGGAGGGCAAGTACGAGTTCCCCGACAAGGACTGGGCCCACATCTCCTGCGCTGCCAAAGA  
CCTCATCTCCAAGCTGCTGGTCCGTGACGCCAAGCAGAGGCTGAGTGCCGCCCAAGTCCTGCAACCCCCCTGGGT  
TCAGGGGTGCGCCCCGGAGAACACCTTGCCCACTCCCATGGTCCTGCAGAGGTGGGACAGTCACTTCTCTCTCCC  
TCCCCACCCCTGTGCGATCCACGTGCGACCTGGAGGACTGGTCAGAACC GTTACTGTGAATGAGTGAAGATCCTG  
GAGGACCCTGGCCCCAGGCCAGCTCCCATCGCTGGGGGACGGTGAACGGCCATGTGTTAATGTTACGATGTTTTT  
AAAAGACAAAAAAAAAAAAAAAAACCTCAAAAGTTTTTTTAAAGTGGGGGAAAAACATCCAAGCACTTTAATTCCA  
ATGTACCAGGTGAAGTACGAGCTCAGAAGTTTCTTTTACACCAACTGTCAATGCCGAATTTTGTATTCTGT  
TTTGTAAGATTTAATAAAAGTCAAAAAACTTGCAAAAAAAAAAAAAA

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**FIGURE 5147**

MVQKKPAELQGFHRSFKGQNPFEAFSLDQPDHGSDDFGLQCSARPDMPASQPIDIPDAKKRGKKKKRGRATDSF  
SGRFEDVYQLQEDVLGEGAHARVQTCINLITSQEYAVKIIIEKQPGHIRSRVFREVEMLYQCQGHRNVLELIEFFE  
EEDRFYLVFEKMRGGSILSHIHKRRHFNELEASVVVDVASALDFLHNKGIAHRDLKPENILCEHPNQVSPVKIC  
DFDLGSGIKLNGDCSPISTPELLTPCGSAEYMAPELVEAFSEEASIYDKRCDLWSLGVILYILLSGYPFVGRCG  
SDCGWDRGEACPACQNMLFESIQEGKYEFDPKDWAHISCAAKDLISKLLVRDAKQRLSAAQVLQHPWVQGCAPEN  
TLPTPMVLQRWDSHFLLPPHPCRIVRPGGLVRTVTVNE

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**FIGURE 5148A**

CCAAGCCTGAGTGTTAATTAACTCTATGTGTGCCCGCTGTAAACATCCGAGGTCAATTTGTTGCGTTGAATTAT  
CTGACCATCCTTTTTTACTGTGACTCTTCCCATTCTCTTTGGCAAGAAGTCCCCTTCTCGCCCCAAACCAGCAA  
GGGACTCCCCACCTGGGTCTGTGCCCTGCCCCGCGTGGGGGCCGAGTCCTTGAATGTGGCTTCAGGGGCTCCT  
GTCCTGACGGTTGCGTCCGGGGAGGGGAAGGGCCGCTGTGCCAAGGTTTCTCTCCAGAACCACAGT  
GGGCCCGCGCATGATGCCCTCAAGATGGTGAAGGGCAGCATCGACCGCATGTTGACAAGAATTCGAGGACTTGG  
TCCGCGGCATCCGTAACCACAAGGAGGACGAGGCAAAATACATATCTCAGTGCATTGATGAGATCAAGCAGGAGC  
TGAAGCAGGACAACATAGCGGTGAAGGCGAACGCGGTCTGCAAGCTGACGTATTTACAGATGTTGGGATACGACA  
TCAGCTGGGCCGCTTCAACATCATAGAAGTGATGAGTGCTTCCAAGTTCACCTTCAAGCGAATTGGCTACCTCG  
CTGCTTCCCAGAGCTTTTACGAAGGCACCGAGCTCATCATGCTGACCACCAATCAGATCCGTAAGGACTTGAGCA  
GCCCCAGCCAGTACGACACAGGTGTTGCACTGACGGGTCTGTCTGCTTCTGTCACCCCAGACCTTGCCAGAGACC  
TGGCAAAATGACATCATGACACTGATGTACACACCAAGCCCTACATCAGGAAGAAGGCTGTGCTGATCATGTACA  
AGGTGTTCTGTAAGTACCCGAGTGCCTGCGCCCTGCCCTTTCCCCGGCTGAAGGAGAAGCTGGAGGACCCCGACC  
CCGGGGTTCAGTCCGCTGCGTCAATGTCTCTGCGAGCTGGCCAGACGCAACCCTAAGAATACTGTCTCCCTGG  
CCCCGCTCTTTTTCAAGCTGATGACGTCTCCACCAACAACCTGGGTCTCATCAAGATCATCAAGCTGTTCCGTG  
CTCTTACTCTCTTTGGAACCGCGCTGGGCAAGAAGCTGATCGAGCCCTCACCAATCTCATCCACAGCACGTCTG  
CCATGTCTCTCTCTATGAATGTGTGAACACCGTGATTGCACTGCTCATCTCGTGTCTTCCGGCATGCCAACCC  
ACAGCGCCAGCATCCAGCTTTGTGTTTCAAGAAATTAAGGATATTGATCGAGGACTCCGATCAGAACTTGAAGTACC  
TGGGGCTGCTGGCAATGTCCAAGATCCTGAAGACCCACCCCAAGTCCGTGCAGTCCCAAGGACCTCATCTGTC  
AGTGCTTGGACGACAAGGACGAGTCCATCCGGCTGCGGGCCCTGGACCTGCTCTATGGGATGGTGTCCAAGAAGA  
ACCTGATGGAGATCGTGAAGAAGCTGATGACCCACGTAGACAAGGCAGAGGGTACCACCTACCGTGACGAGCTGC  
TCACCAAGATCATTGACATCTGCAGCCAGTCCAACCTACCAGTACATCACCACCTTCGAGTGGTACATCAGCATCC  
TGGTGGAGCTGACCCGGCTGGAGGGCACACGGCACGGCCACCTCATCGCCGCCCAAATGCTGGACGTGGCCATCC  
GCGTGAAGGCCATCCGCAAGTTCCGCGTGTCCAGATGTCTGCGCTGCTTGACAGTGCACACCTGCTGGCCAGCA  
GCACCCAGCGGAACGGGATCTGTGAGGTGCTGTACGCTGCCGCTGGATCTGCGGGGAGTTCTCAGAGCATCTGC  
AGGAACCACACCACACTTTGGAGGCCATGTGCGGCCAGAGTACCACGCTGCCAGGCCACATCCAGGCCGTGT  
ATGTGCAGAACGTGGTCAAGCTCTACGCTCCATCTGCAGCAGAAGGAGCAGGCCGGGGAGGCAGAGGGCGCTC  
AGGCCGTACCCAGCTCATGGTGGACCGGTGCCCGAGTTTGTGACAGCGCAGACCTGGAGGTGCAGGAGCGGG  
CGTCTGTCATCTGACGTGGTCAAGCACATCCAGAAGCTTCAGGCCAAGGACGTGCTGTGGCAGAGGAGGTCA  
GCGCTCTCTTTGCTGGGGAGCTGAACCCAGTGGCCCCAAGGCCCAGAAGAAGGTTCCAGTCCCCGAAGGCCTGG  
ACCTGGACGCTGGATCAATGAGCCACTCTCGGACAGCGAGTCAGAGGACGAGAGGCCAGGGCCGTCTTCCACG  
AGGAGGAGCAGCGGCGTCCCAAGCACCGGCCGCTCGGAGGCGGACGAGGAGGAGCTGGCTCGGCGCCGAGAGGCC  
GGAAGCAGGAGCAGGCCAACACCCCTTCTACATCAAGAGCTCGCCATCGCCACAGAAGCGGTACCAGGACACCC  
CGGGCGTGGAGCACATTCCCGTGGTGCAGATTGACCTCTCCGTCCCTTGAAGGTTCCAGGGCTGCCTATGTGAG  
ATCAGTATGTGAAGCTGGAGGAGGAGCGGCGGCACCGGCAGAACTGGAGAAGGACAAGAGGAGGAAAAAGAGGA  
AGGAGAAGGAGAAGAAGGGCAAGCGCCGCCACAGCTCGTGCCACGGAGAGCGACGAGGACATCGCCCTGCC  
AGCAGGTGGACATCGTCACAGAGGAGATGCCGTGAGAATGCTTGCCAGCGACGAGGATGACAAAGACCCCAAG  
ACCCCTACAGGGCTCTGGATATTGACCTGGATAAGCCCTTAGCCGACAGCGAGAACTGCCTATTGAGAAACACA  
GAAACACCGAGACCTCAAAATCCCTGAGAAGGACGTTCCCATGGTAGAAAAGAAGAGCAAGAAACCCAAGAAGA  
AAGAGAAAAACACAAAGAGAAAGAGAGAGACAAGGAGAAGAAGAAGGAGAAGGAGAAGAAGAAATCTCCCAAGC  
CTAAGAAGAAGAACACAGGAAGGAGAAGGAGGAGCGGACCAAGGCAAGAAGAAGTCCAAGAAGCAGCCTCCAG  
GCAGCGAGGAGGAGCGGGGGAGCCGGTGCAGAATGGCGGCCAGAGGAGGAGCAGCTCCCGCTGAGTCCAGCT  
ACTCCCTCTCGCTGAAAATTCTATGTTAAATGACCTGTGACATCCGGGGCAGTCTGCAGGAGGACAGCCAGG  
TCACTGTGGCCATCGTGTGGAGAACAGGAGCAGCAGCATCTCAAGGGCATGGAGCTCAGCGTGTGGACTCAC  
TCAATGCCAGGATGGCCCGGCCGAGGGCTCTCCGTCCACGATGGCGTCCCGTGCTTTCCAGCTGCCCCAG  
GCGTCTCCAACGAAGCCAGTATGTGTTACCATCCAGAGCATCGTCATGGCGCAGAAGCTCAAGGGGACCTGT  
CCTTCATTGCCAAGAATGACGAGGGTGGACCCACGAGAAGCTGGACTTCAGGCTGCACTTCAGCTGCAGCTCCT  
ACTTGATCACCACCTCCCTGCTACAGTGACGCTTTGCTAAGTTGCTGGAGTCTGGGACTTGAGCATGAGCTCAA  
TCAAGTCGATGGCATTCCGATGTCCTTCCAGAATCTTCTGGCGAAGATCTGTTTTACCACCATTTTCCGTTG

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**FIGURE 5148B**

TGGAGCGAGTGGACTCCTGCGCCTCCATGTACAGCCGCTCCATCCAGGGCCACCATGTCTGCCTCCTGGTGAAAA  
AGGGTGAGAACTCTGTCTCAGTCGACGGGAAGTGCAGTGACTCCACGCTACTGAGCAACTTGTTAGAAGAGATGA  
AGGCGACGCTGGCCAAGTGTTGAGAGCTGCCTGCGAGCCCCGCACCACCCCGCGGAGCACGTACCCAGGGACCGC  
AGCCCTGACGTGTCTCGCCTCTCCTCAGTCGTGTGTACTGTACCCAAGCCTGAGTGTTAATTAACTCTATGTTG  
TCCGCCGTGTAGACATCCGAGGTCATTTGTTGCGTTGAATTATCTGACCATCCTTTTTTACTGTGACTCTTCCCA  
TTCTCTTTGGCAAGAAGTCCCCCTCTCGCCCCCAAACCAGCAAGGGACTCCCCACCTGGGTCTGTGCCCTGCC  
CGCGCTGGGGGCGAGTCCTTGAATGTGGCTTCAGGGGCTCCTGTCTGGGCCAGGGCCTGATGGGCACCACGTG  
AGGGGCACCTTGGTGGACAGGGCGGGGCTGACGTGGCCTCCTCTGGGGTCGCCTGCTTTTGACCCAAAGGTCCTGA  
CGGTTGCGTCCGGGGGAGGGGAAGGAAGGGCCGCTGTGCCAAGGTTTTCTCTCCAGAACCACAGTGGGAAAG  
CGGCTTGCCAGGCGTTGTCCATTGTCAGTGTGCTCGTGGGCTGGTGACTGGGTCTTGGGATCCAGGCCACGCG  
CCAGCCAGGCTGTGGGCAGGGCGGGGCCAGGGACGCCAAAGAGAGGTTGCAGTCAGAACCGTGGACGGGGTGGGT  
TGAGGCCTCTCTGCCACCCGCTTCTCTGGTCAGCAGAAGTGCATCTCGGCTTGGGTTTGGGGTGGTCCGCATCCC  
CTGCTTGCCACTATGCGCACCAAGGTTTCCCCACATCCTTCCCAGCACCTTAGGAAGGCCAGGCAGGGCCTGG  
AAGCAGCGGACCTGGGCTGTTCTGTGTTGAAGGAGTGTGCCAGTGCCCTTGGGCAGGACCTGTGAGAGCCACCT  
CACAGGCAGAGCCCCCACCAGGCAGGGCAAGGAGACTCCGCTCACTCCCCACGGCCAGCGTGGGCACAGGACTGA  
CCCTTCTTCAGAGATAATGACATTTTATCTTCTCCTTTTGATGAAAACTGTCACCTTAGCATGTAATCCATTACA  
GAATCCCATGCAGTGATTCCAGGATTTGAAATTGTATGATGTGTACATAAGAATTTATTTGCTATCGACATTCC  
CGTATAAAGAGAGAGACATATCACGCTGCTGTCATGATTTTGTGTCAAGATGATCCAATAAAGTTGTAAACAGG



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**FIGURE 5149**

MALKMVKGSIDRMFDKNLQDLVRGIRNHKEDEAKYISQCIDEIKQELKQDNIAVKANAVCKLTYLQMLGYDISWA  
AFNIIIEVMSASKFTFKRIGYLAASQSFHEGTDVIMLTINQIRKDLSSPSQYDTGVALTGLSCFVTPDLARDLAND  
IMTILMSHTKPYIRKKAVLIMYKVFLKYPESLRPAFPRLKEKLEDDPGVQSAAVNVICELARRNPKNYLSLAPLF  
FKLMTSSTNNWVLIKIIKLFGALTPLEPRLGKKLIEPLTNLIHSTSAMSLLYECVNTVIAVLISLSSGMPNHSAS  
IQLCVQKLRILIEDSDQNLKYLGLLAMSKILKTHPKSVQSHKDLILQCLDDKDESIRLRALDLYGMVSKKNLME  
IVKKLMTHVDKAEGTTYRDELLTKIIDICSQSNYQYITNFEWYISILVELTRLEGTRHGHIAAQMLDVAIRVKA  
IRKFVQSMSALLDSAHLLASSTQRNGICEVLYAAAWICGEFSEHLQEPHHTLEAMLRPRVTTLPGHIQAVYVQN  
VVKLYASILQQKEQAGEAEGAQAVTQLMVDRLPQFVQSADLEVQERASCILQLVKHIQKLQAKDVPVAEEVSALF  
AGELNPVAPKAQKKVPVPEGLDLDAWINEPLSDSESEDERPRAVFHEEEQRRPKHRPSEADEEELARRREARKQE  
QANNPFYIKSSPSPQKRYQDTPGVEHIPVVQIDLSVPLKVPGLPMSDQYVKLEEEERRHRQKLEKDKRRKKRKEKE  
KKGKRRHSSLPTESDEDIAPAQQVDIVTEEMPENALPSDEDDKDPNDPYRALDIDLKPLADSEKLP IQKHRNTE  
TSKSPEKDVPMVEKKSKPKKKEKKHKEKERDKEKKKEKEKKKSPKPKKKKHRKEKEERTKGKKKSKKQPPGSEE  
AAGEPVQNGAPEEEEQLPPESSYSLLAENSYVKMTCDIRGSLQEDSQVTVAIVLENRSSILKGMELSVLDSLNR  
MARPGSSVHDGVPVFPFQLPPGVSNEAQYVFTIQSIVMAQKLKGTLSFIAKNDEGATHEKLDLFRHLHFCSSYLIT  
TPCYSDAFAKLLESGDLSMSSIKVDGIRMSFQNLAKICFHHHFSVVERVDSASMYSRSIQGHHVCLLVKKGEN  
SVSVDGKCSDSLTLNLLLEEMKATLAKC

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**FIGURE 5150A**

CGGGCCGTCCACTGGACTCCTGCGCCATATCCTGCAGCAGGTCTACAACCACTCGGTGACCGACCCCGAGAAGCT  
CAACAACCTACGAGCCCTTCTCCCCGAGGTGTACGGGGAGACCTCCTTCGACCTGGTGGCCAGATGATTGATGA  
GATCAAGATGACCGACGACGACCTGTTTGTGGACTTGGGGAGCGGTGTGGCCAGGTTCGTGCTCCAGGTTGCTGC  
TGCCACCAACTGCAAACATCACTATGGCGTCGAGAAAGCAGACATCCCGCCAAGTATGCGGAGACCATGGACCG  
CGAGTTCAGGAAGTGGATGAAATGGTATGGAAAAAGCATGCAGAATACACATTGGAGAGAGGCGATTTCCTCTC  
AGAAGAGTGGAGGGAGCGAATCGCCAACACGAGTGTTATATTGTGAATAATTTGCTTTTGGTCTGAGGTGGA  
TCACCAGCTGAAGGAGCGGTTTGCAAACATGAAGGAAGGTGGCAGAATCGTGTCTCGAAACCCCTTTCACCTCT  
GAACTTCAGAATAAACAGTAGAACTTGAGTGACATCGGCACCATCATGCGCGTGGTGGAGCTTCGCCCCGTAA  
GGGCTCGGTGTCTGTGGACGGGGAAGCCAGTCTCTACTACCTGCACACTATCGACCGCACCATACTTGAAAACTA  
TTTTCTAGTCTGAAAAACCCAAAACCTCAGGGAGGAACAGGAGCAGCCCGCGCCGCCAGCAGCGCGAGAGCAA  
GAGCAACGCGGCCACGCCCACTAAGGGCCAGAGGGCAAGGTGGCCGGCCCCGCCGACGCCCCCATGGACTCTGG  
TGCTGAGGAAGAGAAGCGGGAGCAGCCAGTGAAGAAGCCGTCTCCCTCCAAAGCCCGCAAGAAGAAGCTAAA  
CAAGAAGGGGAGGAAGATGGCTGGCCGCAAGCGCGGCCCGCCCAAGAAGATGAACACTGCGAACCCCGAGCGGAA  
GCCCCAAGAAGAACCAAACTGCACTGGATGCCCTGCACGCTCAGACCGTGTCTCAGACGGCGGCCCTCTCACCCCA  
GGATGCTACAGATCCCCCTACAGCCCGTTCTACCAGCTACCTCCGAGCGTGCAGCGGCCTCCCCAACCCGCT  
GCTGGTGGCGCCCAACCCGCGCTGCAGAGCTTCTAGAGTCCCTTCAAGATCCAGTACCTGCAGTTCCTGGC  
ATACACAAAGACCCCCAGTACAAGGCCAGCCTGCAGGAGCTGCTGGGCCAGGAGAAGAGAAGAACGCCAGCT  
CCTGGGTGCGGCTCAGCAGCTCCTCAGCCACTGCCAGGCCCAGAAGGAGGAGATCAGGAGGCTGTTTCAGCAAAA  
ATTGGATGAGCTGGGTGTGAAGCGCTGACCTACAACGACCTGATTCAAGCGCAGAAGGAGATCTCCGCCATAA  
CCAGCAGCTGCGGGAGCAGTCGGAGCAGCTGGAGCAGGACAACCGCGCGCTCCGCGCCAGAGCTTCAGCTGCT  
CAAGGCTCCTGCGAGGAGCTGCAGCTGGACTGGGCCACGCTGTCGCTGGAGAAGCTGTTGAAGGAGAAGCAGGC  
CCTGAAGAGCCAGATCTCGGAGAAGCAGAGGCACTGCTGGAGCTGCAGATCAGCATTGTGGAGCTAGAGAAGAG  
CCAGCGGCAGCAGGAGCTCCTGCAGCTCAAGTCTGTGTGCCCTGACGACGCCCTGTCCCTGCACCTGCGTGG  
GAAGGGCGCCCTGGGCCGCGAGCTGGAGCCTGACGCCAGCCGGCTGCACCTGGAGCTGGACTGCACCAAGTTCTC  
GCTGCCTCACTTGAGCAGCATGAGCCCGAGCTCTCCATGAACGGCCAGGCTGCTGGCTATGAGCTCTGCGGTGT  
GCTGAGCCGGCCTTCGTGGAAGCAGAACACGCCCCAGTACCTGGCCTCACCCCTGGACCAGGAGGTGGTGCCTG  
TACCCCTAGCCACGTGCGCCGCGCGCCTGGAGAAGCTGTCTGGCCTAGCCGCACCCGACTACACTAGGCTGTC  
CCCGGCCAAGATTGTGCTGAGCGGCACCTGAGCCAGGACCACACGGTGCCCGCAGGCCGGCTGCCAGTGAGCT  
GCATTGAGAGCTGAGCACACCAAGGAGAACGGCCTTCCCTACCAGAGCCCCAGCGTGCCTGGCAGCATGAAGCT  
GAGCCCTCAGGACCCGCGGCCCTGTCCCTGGGGCCTTGACGCTTGCTGGAGAGAAGAGCAGTGAGAAGGGCCT  
GAGAGAGCGCGCTACGGCAGCAGCGGGGAGCTCATCACCAGCCTGCCATCAGCATCCCGCTCAGCACCCTGCA  
GCCCCAACAGCTCCCGGTGAGCATTCCCTGGCCAGCGTGGTGTGCCAGCCGCGCCGAGAGGGCGAGGAGCAC  
CCCCAGTCCCGTGTGAGCCCCGTGACCCCTCGTCCACACTGAAAAGCAGATTGGTGCTAATGCCACGGTGC  
TGGGAGCAGAAGCCTTGCCCTGGCCCCGCGAGGCTTCTCTACGCTGGCTCGGTGGCCATCAGCGGGCCTTGGC  
GGGAGCCCCGCTCTCTCACACCTGGAGCCGAGCCGGCCACCTGGATGAGTCTCCAGCTCTGGAGCCTTTT  
TGCCACCGTGGGGTCCCGCAGCTCCACGCCACAGCACCCCTGTGCTGGCACAGCCCCGGAACCTGCTTCTGCTG  
CTCTCCCGCCCCACAGCTCTCTCCAGTCCCCGCTTGGTGGGGCCGCCAGGGCCGTTGCCCGAGGCCAGCAA  
GGGAGACCTGCCCTCCGATTCCGGCTTCTCAGATCTGAGAGTGAAGCCAAGAGGAGGATTGTGTTACCATCAC  
CACTGGTGCGGGCAGTGCCAAGCAGTGCCTCCAGCAAGCACAGCCCCCTGACCGCCAGCGCCCGTGGGGACTG  
TGTGCCGAGCCACGGGCAGGACAGTCGAGGCGCGCGCGCGGAAGCAGCATCTCGGGGACGCCAGCTTGAG  
CGCAGGCGTGTCCCCAAGCGCCGAGCCCTGCCGTCCGTGCTGGCCTTTTACACAGCCTTCGGGGTCTCCCT  
CAACCTCAACTCCATGGTCAGTAACATCAACCAGCCCCGAGGATTACAGCCATCTCGTCCCCGAGACCTCCCT  
GAAGAGCTCCCTGTGCCCTACCAGGACCAGCAGCCCCCGTGTCAAGAAGGAGCGGCCTCTGAGCCAGAC  
CAATGGGGCACACTACTCCCCACTACCTCAGACGAGGAGCCAGGCTCTGAGGACGAGCCAGCAGTGTGCAAT  
TGAGAGAAAAATTGCAACAATCTCTTAGAAAGCAAATCTCCCCGAAAACCTTGAAAATGGTGGTGGCTTGGC  
GGGAAGGAAGCCCGCGCCCGCGCGGAGCCAGTCAATAGCAGCAAGTGGAAGTCCACCTTCTCGCCCATCTCCGA  
CATCGGCTGGCCAAGTCGGCGGACAGCCGCTGCAGGCCAGCTCCGCCCTCAGCCAGAACTCCCTGTTACGTT  
CCGGCCCGCCCTGGAGGAGCCCTCTGCCGATGCCAAGCTGGCCGCTACCCAGGAAAGGCTTCCCGGCTCCCT

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**FIGURE 5150B**

GTCTGGGGGCTGACGGACTCAGCCCGGGCACCAACCCTGCCAACGGCTGCACCTTCGGCGGGGGCCTGGCCGCGGA  
CCTGAGTTTACACAGCTTCAGTGATGGTGCTTCTCTTCCCCACAAGGGCCCCGAGGCGGGCCGGCCTGAGCTCCCC  
GCTGAGCTTCCCCCTCGCAGCGCGGCAAGGAGGGCTCGGACGCCAACCCCTTTCCTGAGCAAGAGGCAGCTGGACGG  
CCTGGCTGGGCTGAAGGGCGAGGGCAGCCGCGGCAAGGCCCCGGGACCGCGAGGTCGACCTCAAGAATGGCCACAA  
GGACAAGACCCCCACTGCTGAGCGGCAAGGCCGCAAGGCCCGGGACCGCGAGGTCGACCTCAAGAATGGCCACAA  
CCTCTTCACTCTCTGCGGCGGCGTGCTCCCGGAAGCCTCCTCAGCGGCCCCGGCCTGGCCCCGGCGGCGTCTCTC  
CGCAGGCGGCGCGGCGTCTCTCCGCCAGACGCACCGGTCTTCTGGGCCCCCTTCCCGCCGGGACCGCAGTTTCGC  
GCTCGGCCCCATGTCCCTGCAGGCCAACCTCGGCTCCGTGGCCGGCTCCTCCGTGCTGCAGTCGCTGTTTCAGCTC  
TGTCGGGGCCGCGCAGGCCCTGGTGACGTGTCTGCTCCGCTGCCACCAGACTGACCAACTCGCACGCCATGGGCAG  
CTTTTCCGGGGTGGCAGGCGGCACAGTTGGAGGTAAGTAGGATTTCTACCTCAACCGCGAGACCTATGCAAGGAC  
GGTGTGGACCAACTCGCGCCCGCGGCATGGTGCCCGCGGCTCGCCGGGCTCCCACCCCTGGACGGCAGAGGCAA  
GGACGGACGGGAGCTCCACTGTGAATCGGCGGCACGCGCCGCAAGGAGGCTGGGACTGGTCCAGTTTGTACTGTCTG  
ATAGTTTTAGATAAAGTATTTATCATTTTTTAAAAAGTATAACAATTCTGACTTATTTTATTCCATCTAAGTGG  
TAAAGGCAACTTATTGAGAAATATAAATATCTATATATGAGAGCTCTATATAAAGACACGTGTCTGCAGGGCGG  
GCCCCGCCAGCGGATTTCGCCACAGCCTGCCCCGGTGCTATCTCGTCCCCAGGCCCGCGCCTGCCTCCACCCGCTTG  
GTGCTGACTAGACGCTGACAACGCCGAACCCCGTTCTCGGAAACGCCGCCCGGGCCGGCTCCCCGACGCGCTGCT  
CCCGTACCAAAGGCAGGCCCGTCGCCACCACATTCTCGGAGGCCTCCCCGCGGCTGAGCCCTTCTGAGCGC  
CCTGGCGCTGCGCTGAGCTCTTACCTTTACCCCGGCACTGTGAACCCCAAGACTGTTACCCCTCCGGGGCGTG  
GGTTGCGCCCTTGCAATGTGAAGGGGCTGCGCGGTGACGCAGCTGGCCATGTGCTGCGCGATGGTGTCTGAGGA  
CGGCGCGGGCACGTTGAACAAGTGCAATTTACTTTTGTATTTCTCGGCTGTCCATGGCTCGCAGCATGCCCTGCGA  
TGCGGGGCAGGCCTGTCTGTTGGTCCCTTGGTGTCTGTACAGGAGAGAGTCACACTAATGAGTGGCAGTATTTT  
ATAGAGATGTGATGAGAATTTATAAATTTATAGATTTGACAGCTTTTATTTTATAGATGGTATAATGCACAGTGA  
AGAGGAAAGAAAAGCGAGGGGAAAAACCTTATTTATTCAAACAGTGACAAAATGGCCCCAGCGTCAGCCCCGA  
CCCTAGACCCCTCAGTTGCAGCTCCAGCAGCCAGACAGAGCTGCCGGCGCCCTGCCTGCCCCACATCCCTTC  
CTGTCAGGGCCACGCCTGGCACCCATCCCTTGGAGCCTGTGCTGGTTCTCCAGCTGCTGTGGGTGTGCTGGGGC  
CAGGGTGCAGTGTGAAACCTGGCCTCTCTGGCCCTAGGCCCCAGGGTGACGTCGGCCCCCACTCTGCAGCCTT  
GGCGGGTGCCTGGGACTGGGTGTGGAAGGAGAGGAGCTGAGGCCGGGTGTAGCAGGCAGGCAGGGCCACTCCAG  
TGCTTCTGGAGCCCTGAGCAGTCAGGGCCTGGGTGTCTGAGCAGTGGTGGCTCTGTGCCCTCCCTGGAGGATGG  
GATCTGGGA

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**FIGURE 5151**

MIDEIKMTDDDLFVDLGSGVGQVVLQVAAATNCKHHYGEKADIPAKYAEITMDREFRKWMKWYGKKHAEYTLERG  
DFLSEEWRRERIANSTSVIFVNNFAFGPEVDHQLKERFANMKEGGRIVSSKPFAPLNFRINSRNLSDIGTIMRVVEL  
SPLKGSVSWTGKPVSYLHTIDRTILENYFSSLKNPKLREEQEAAARRRQRESKSNAATPTKGPEGKVAGPADAP  
MDSGAEEEEKAGAATVKKPSKARKKKLNKKGRKMAGRKRGRPKMNTANPERKPKKNQTALDALHAQTVSQTAA  
SSPDQDAYRSPHSPFYQLPPSVQRHSPNPLLVAPTPPALQKLLESFKIQYLQFLAYTKTPQYKASLQELLGQEK  
NAQLLGAAQQLLSHCQAQKEEIRRLFQQKLDELGVKALTYNDLIQAQKEISAHNQQLREQSEQLEQDNRALRGQS  
LQLLKARCEELQLDWATLSLEKLLKEKQALKSQISEKQRHCLELQISIVELEKSQRQQELLQKSCVPPDDALS  
HLRGKALGRELEPDASRLHLELDCTKFSPLPHLSSMSPELSMNGQAAGYELCGVLSRPSSKQNTPOYLASPLDQE  
VVPCTPSHVGRPRLEKLSGLAAPDYTRLSPAKIVLRRHLSQDHTVPGRPAASELHSRAEHTKENGLPYQSPSVPG  
SMKLSPPQDPRPLSPGALQLAGEKSSEKGLRERAYGSSGELITSLPISIPSTVQPNKLPVSIPLASVVLPSRAER  
ARSTPSPVLQPRDPSTLEKQIGANAHGAGSRSLALAPAGFSYAGSVAISGALAGSPASLTPGAEPATLDESSSS  
GSLFATVGSRSSTPQHPLLLAQPRNSLPASPAHQLSSSPRLGGAAQGPLPEASKGDLPSDSGFSDEPESEAKRRIV  
FTITTGAGSAKQSPSSKHSPLTASARGDCVP SHGQDSRRRGRRKRASAGTPSLSAGVSPKRRALPSVAGLFTQPS  
GSPLNLNSMVSININQPLEITAISSPETSLKSSPVYQDHDQPPVLKKERPLSQTNGAHYSPLTSDEEPGSEDEPS  
SARIERKIATISLESKSPPKTLENGGGLAGRKPAAPAGEPVNSSKWKSTFSPISDIGLAKSADSPLQASSALSQNS  
LFTFREALEEPSADAKLAHPRKGFPGSLSGADGLSPGTNPANGCTFGGGLAADLSLHSFSDGASLPHKGPEAAG  
LSSPLSFPSQRGKEGSDANPFLSKRQLDGLAGLKGEGRGKEAGEGGLPLCGPTDKTPLLSGKAAKARDREVDLK  
NGHNLFI SAAVPPGSLLSGPGLAPAASSAGGAASSAQTHRSFLGPFPPGPQFALGPMQLQANLGSVAGSSVLQS  
LFSSVPAAAGLVHVSSAATRLTN SHAMGSFSGVAGGTGGVFNHAVPSASAHFPGARVGRGAACGSATLGPSPQLQ  
AAASASASSFQAPASVETRPPPPPPPPPPPLPPPAHLGRSPAGPPVLHAPPPPNALPPPTLLASNPEPALLOS  
LASLPPNQAFLPPTSAASLPPANASLSIKLTSLPHKGARPSFTVHHQPLPRLALAAQAAPGIPQASATGPSAVWVS  
LGMPPPYAAHLSGVKPR

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**FIGURE 5152**

GGCACGAGGCTTTCTTTGCCCCGCGTTTCGCCAAACGAAGTCGTGGAGGTGGCGAAACGAGGAGGAGATAACGCGG  
CCTTGGGCTCTGGTGTCTCCCAGTCTGCTAAAGCCCTAAGGCCATCACCATGGACTTCCAGCATCGCCCCGGGGG  
CAAGACCGGGAGCGGGGGCGTGGCTCCTCCTCCGAGAGCAACCGTGACCGCAGGGAGCGCCTCCGGCAGCTGGC  
CCTGGAGACCATCGACATCAACAAGGACCCGTACTTCATGAAGAACCACCTGGGGCTCCTATGAATGAAACTCTG  
CCTGACACTTCACAACAATGAGGGGAGCTACCTGGCACATACGCAGGGGAAGAAGCACCAGACCAACCTGGCCCG  
GCGAGCAGCCAAGGAGGCCAAGGAGGCCCCTGCCAGCCCGCGCCTGAGAAGGTCAAGGTGGAGGTGAAGAAGTT  
TGTGAAGATCGGCCGCCCCGGGCTACAAAGTGACCAAGCAGAGAGACTCGGAGATGGGCCAGCAGAGCCTCCTCTT  
CCAGATTGACTACCCTGAGATCGCCGAGGGCATCATGCCACGTACCGCTTCATGTCTGCGTACGAGCAGAGGAT  
CGAGCCTCCGACCGGCGCTGGCAGTACCTGCTCATGGCCGCCGAGCCCTACGAGACCATTGCCTTCAAGGTGCC  
GAGCAGAGAGATCGACAAGGCGGAGGGCAAGTTCTGGACACACTGGAACCGGGAGACCAAGCAGTTCTTCTCTCA  
GTTCCACTTTAAGATGGAGAAGCCCCGGCTCCACCCAGCCTCCCTGCTGGCCCCCCTGGGGTGAAGCGGCCTCC  
ACCCCCGCTGATGAACGGTCTGCCCCCTCGGCCACCCTGCCTGAGTCTTTGCCACCGCCCCCGCCAGGAGGCCT  
GCCTCTGCCACCCATGCCCCCACAGGGCCTGCGCCCTCAGGGCCCCCGGGACCACCCAGCTACCCCCGCCAGC  
TCCAGGGGTCCACCCCCCGGCCCAAGTGGTGCATCCCCCTGCATCTGGGGTCCATCCCCCAGCTCCTGGCGTCCA  
CCCCCAGCTCCTGGCGTCCATCCCCCAGCCCTGGGGTCCACCCACCAACCTCTGGGGTCCACCCCCAGCTCC  
TGGAGTCCACCTCCAGCCCCCGGGTTACCCACCAGCCCCCGGAGTCCACCCACCAGCCCTGGGGTTCACCC  
ACCAGCCCCAGGGGTCCATCCTCCCCATCAGCGGGGTTCACCCCAAGGCCCGGGGTGCACCCAGCAGCCCC  
CGCCGTTACCTCAGGCCCCAGGGTGCACCCACCAGCCCCAGGGATGCACCTCAGGCCCCGGGGTTCACCC  
CCAACTCCCGGGTCCATCCGTCGGCTCCTGGGGTCCACCTCAGCCTCCGGGAGTTCACCCCTCAAATCCTGG  
GGTGACCCCCCAACTCCCATGCCCCAATGCTGAGGCCCCACTTCCCTCCGAAGGCCAGGGAACATACCTCC  
CCCTCCCCCAACCAACTGAGAAGCTGCTCCCTCCCCCAGCAAGCCCAGCGCCAGGTGCTCTTGCTTTTCCCACT  
GAGAGAAGGCTGCTCTTTGTACTGCCCCCGCTCATTAAACAGCCTCCCCCAAAAAAAAAAAAAAAAAA

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**FIGURE 5153**

MDFQHRPGGKTGSGGVASSSESNRDRRLRQLALETIDINKDPYFMKNHLGSECKLCLTLHNNEGSYLAHTQG  
KKHQTNLARAAKEAKEAPAPAPPAPEKVKVEVKFVKIGRPGYKVTQORDSEMGQQSLLFQIDYPEIAEGIMPRHR  
FMSAYEQRIEPPDRRWQYLLMAAEPYETIAFKVPSREIDKAEGKFWTHWNRETKQFFLQFHFMEKPPAPPSLPA  
GPPGVKRPPPLMNGLPPRPPLPESLPPPPGGLPLPPMPPTGPAPSGPPGPPQLPPPAPGVHPPAPVVHPPASG  
VHPPAPGVHPPAPGVHPPAPGVHPPTSGVHPPAPGVHPPAPGVHPPAPGVHPPAPGVHPPAPGVHPPSAGVHPQ  
APGVHPPAPAVHPQAPGVHPPAPGMHPQAPGVHPQPPGVHPSAPGVHPQPPGVHPSNPGVHPPTPMPPMLRPPLP  
SEPGNIPPPPTN

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**FIGURE 5154**

TGCGAACGGCGAGCAGCGGGCGGGCGGGAGAGACGCAGCGGAGGTTTTCTGGTTTCGGACCCAGCGGCCGG  
ATGGTGAAATCCTCCCTGCAGCGGATCCTCAATAGCCACTGCTTCGCCAGAGAGAAGGAAGGGGATAAAGCCAGC  
GCCACCATCCACGCCAGCCGACCATGCCGCTCCTTAGCCTGCACAGCCGCGGGCGGCAGCAGCAGTGAGAGTTCC  
AGGGTCTCCCTCCACTGCTGTAGTAACCCGGGTCCGGGGCCTCGGTGGTGCTCCTGATGCCCCACCCACCCCT  
GAAGATCCCAGGTGGGCGAGGGAATAGTCAGAGGGATCACAATCTTTCAGCTAACTTATTCTACTCCGATGATCG  
GCTGAATGTAACAGAGGAACTAACGTCCAACGACAAGACGAGGATTCTCAACGTCCAGTCCAGGCTCACAGACGC  
CAAACGCATTAACTGGCGAACAGTGCTGAGTGGCGGCAGCCTCTACATCGAGATCCCGGGCGGGCGCTGCCCGA  
GGGGAGCAAGGACAGCTTTCAGTTCTCCTGGAGTTCGCTGAGGAGCAGCTGCGAGCCGACCATGCTTTCATTG  
CTTCCACAAGAACCGCGAGGACAGAGCCGCCTTGCTCCGAACCTTCAGCTTTTGGGCTTTGAGATTGTGAGACC  
GGGGCATCCCCTTGTCCCAAGAGACCCGACGCTTGCTTCATGGCTACACGTTCGAGAGAGAGTCTTCGGGAGA  
GGAGGAGGAGTAGGGCCGCCTCGGGGCTGGGCATCCGGCCCTGGGGCCACCCCTTGTGAGCCGGGTGGGTAGGA  
ACCGTAGACTCGCTCATCTCGCCTGGGTTTTGTCGCGATGTTGTAATCGTGCAAATAAACGCTCACTCCGAATTAG  
CGGTGTATTTCTTGAAGTTAATATTGTGTTGTGATACTGAAGTATTGCTTTAATTCTAAATAAAAATTTATA  
TTTTACTTTTT

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**FIGURE 5155**

ACCATTCTGATGTTGGAGCGGCCTCGGTCCGGTTGACTTTGCGGACATGGAGGGCGGCTTCGGCTCCGATTTCGG  
GGGCTCCGGCAGCGGGAAGCTGGACCCAGGGCTCATAATGGAGCAGGTGAAAGTGCAGATCGCCGTGGCCAACGC  
GCAGGAGCTGCTGCAGAGGATGACGGACAAGTGTTCGGGAAGTGATAGGGAAACCTGGGGGCTCCCTGGACAA  
CTCCGAGCAGAAGTGCATCGCCATGTGCATGGACCGCTACATGGACGCCTGGAACACCGTGTCTCGCGCCTACAA  
CTCGCGGCTGCAGCGGGAACGAGCCAACATGTGACCGGCGAGCGCGGGCCACCCACCCGTTCATTTCCATAAA  
CGTGCTTTGAGAGGCGGGGTCCGCATGTACGTACTGCCTGCCCGGGGCTTAGGAGGGTGGCACCGGTGCTGGGAC  
ACACGGGACTGTGTCTCGCCACCCCGCCCTGCCCTGCCAGCCAGTGCAGCTTGGATCTCGGGGGTGTGGG  
GCCCTGTGCCTTCCTGAAGTGCTGGCAGCCAGTGGCACCTCCTTCAGGCCTTTGGGGTATTCCCCTAGTGTGCC  
CAAGTCAGCCTCATATTCTGGGCGGACAGCTTGTCTGGACTTCGGAGTTGGGGGTGGTCAGACACCACAGGAGCT  
GTCACCTCCTGCGGATGGGCAAATAAATTGGTGGAGGACGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAA



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**FIGURE 5156**

MEGGFGSDFGGSGSKLDPGLIMEQVKVQIAVANAQELLQRM<sub>1</sub>TDKCFRKCIGKPGGSLDNSEQKCIAMCMDRYMD  
AWNTVSRAYNSRLQ<sub>2</sub>RERANM

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**FIGURE 5157**

GGCACGAGGCCTCGTGCCGTTTTAATGGATATTTATTTTTTTTACATTGGTCAGTACACAGGTCAGGAGCTCACGC  
CAGGGCCTTGAGGACAGGCTGACCCCTCCTCCCGGGGTGGCGTGGGGCTGGGGCACCCCTCCGACGGCAGAGCCTC  
CTTCAGAAAGTGAGCTCAAGTCTTAAAGACACCAAACTGAGCCATGGGCACGCGCCGCTCTCCGGGCCATGGCG  
TTCACTGCAGGGCGGGGGCGGCACCGCTCCCTGTGACTGCATCCCGCCTCCCTGGGGACCTGCCTGTGGCAGGA  
AGGAATGGGGGGCCCCAGCCCCAGGCCGGGAAGGAGCCAGCGCCGACAAAGCAGAAACACCCGCTGCTCCACGT  
AGCCCCTGCTCGCTGTCTTGTCTCTCAGAAGTCCCGGTCCCATGTAGATAGAGGGGGGGCGCATCTTACCAAAGCA  
TTTCTCTGGAGGCTACGCGCTGTGCTCCAGTCAGGCGGTGGTAGGGAGCTTTGCCTGCCCCGGGGATACC  
CTCTGCCAGCCGCTGGAAGTGGGAATGCTGGCGACAGACTGTGTCTCTTTCCACCTTCATAGCAGGAATCACC  
CGGACCCGACTGGCTGGGCTTCGTGCTAGCGAGGGTTCTGGGGGTGGGTCTTGGTGATCTTGTCTATGGGGAGT  
CTGCAGTGGTCTCAGCCACATCCTATGTATTTTGGCTCTGGAGGAGCAAAGCTGTATCCTGGAGTTGGTCTGTGA  
TTTGCCGACAGCCTTGAGGCTGGGCTCAGGGACAAAGTCCCCCCCCAAAACCCGAGGTCTCATGTCCAGACGC  
TGCCAGTCCTGTCTGAAAACAGCACGCCCCAGGCCACAGAACCCCCACCCTACATTTGCCTTGGGTGGAGC  
TGGGGGTGGTCTAGGACTGCGGGTGCCCTTAGCTGAAGGGGGTGGGGAGAAGCGTGGACTGGGCAGCCTGTGGG  
TAATTGGAGGTTCAATTGAGAATTGAGTCTTTGGAAACACTAAGAAAATCAAATTTTTAAAAGTTATTTATGGCCT  
GGGAAACAATTTGCATTTGTCCCCAAATACGCTTAGCTGTGTGCCGCTTAGAACGATGCGAAACCATCCCTCTGT  
GTAAGCCCGTGCCGTGTGACTCGAAGCCTAGCGCCCTCCCTGCGAAGCATCAGACGCCACCCAGCCCTGGGGGGA  
GGCCACGCCTGCTGGACCAACGCGGGTTCTGGGGTGACAGCGCCAGGTTAACGCTGAAGCCTGCCCCGCTGAG  
CCCAGGAGCCGGGAGGCCTGCGGGCTGACCCAGAATCCGATCATGCACCTGTCTCATGCCAGCGGCTTTGGCTG  
GGGTTGGTCTGAAGCCTGCACGCGGCAGTTCTTTGTTAAAGATCTGAGGGACTCCTCAGTCCTGGGGCGTCGCCG  
CCTGCAGCCTCTTCCAAGCCCTGCGTCCAGCGAGCGTCACAGCACAACCTGCAAAAACGGAGCTGGGCTGCAGCT  
GGGGCTGGCATGGACTTTTCATTTCAGAGATTCGGTTTTTAAGAAGATGCATGCCAATGTGTTCTTTTTTTTTTC  
CAATGATTTGTAATATACATTTTATGACTGGAACTTTTTTGTACAACACTCCAATAAACATTTTGATTTTAAAA  
AAAAAAAAAAAAAAAA

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**FIGURE 5158**

MAFTAGRGRHRSPVTASRLPGDLPVAGRNGGPQPQAGKEPAADKAETPAAPRSPCSLSLLSEVPVPCR

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**FIGURE 5159**

CGTCGGACTACCGTTGGTTTCCGCAACTTCCTGGATTATCCTCGCCAAGGACTTTGCAATATATTTTTCCGCCTT  
TTCTGGAAGGATTTTCGCTGCTTCCCGAAGGTCTTGGACGAGCGCTCTAGCTCTGTGGGAAGGTTTTGGGCTCTCT  
GGCTCGGATTTTIGCAATTTCTCCCTGGGGACTGCCGTGGAGCCGCATCCACTGTGGATTATAATTGCAACATGAC  
GCTGGAAGAGCTTCGTGGCGTGCGACAACGCGCGCAGAAGATGCAGACGGTGACCGCCGCGGTGGAGGAGCTTTT  
GGTGGCCGCTCAGCGCCAGGATCGCCTCACAGTGGGGGTGTACGAGTCGGCCAAGTTGATGAATGTGGACCCAGA  
CAGCGTGGTCCTCTGCCTCTTGGCCATTGACGAGGAGGAGGAGGATGACATCGCCCTGCAAATCCACTTCACGCT  
CATCCAGTCCTTCTGCTGTGACAACGACATCAACATCGTGCGGGTGTCTGGGCATGCAGCGCTGGCGCAGCTCCT  
GGGAGAGCCGGCCGAGACCCAGGGCACCACCGAGGCCCGAGACCTGCATTGTCTCTTGGTCACGAACCTTCACAC  
GGACGCTTGAAGAGCCACGGCTTGGTGGAGGTGGCCAGCTACTGCGAAGAAAGCCGGGGCAACAACCAAGTGGGT  
CCCCATACATCTCTCTTCAGGAACGCTGAGGCCCTTCCCAGCAGCAGAATCTGTTGAGTTGCTGCCACAAACAAAA  
AATACAATAAATATTTGAACCCCTCCCCCCCAGCACAAACCCCAACCAACCCACGAGGACCATCGG  
GGGAGAGTCGTTGGAGACTGAAGAGGAAGAGGAGGAGGAGAAGGGGAGTGAGCGGCCGCCCCAGGGCGGAGAT  
CCAGGAGCTGGCGGCCGCCGATCCGATGGAGAAGGGGGGACCCAGGCCAGCAGGAGACAGGACCCCGAAGCTGA  
GGCCTTGGGATGGAGCAGAAGCCGGAGTGGCGGGGCACGCTGCCGCCTTCCCCATCACGGAGGGTCCAGACTGTC  
CACTCGGGGGTGGAGTGAGACTGACTGCAAGCCCCACCCTCCTTGAGACTGGAGCTGGCGTCTGCATACGAGAGA  
CTTGGTTGAACTTGGTTGGTCCTTGTCTGCACCTCGACAAGACCACTTTGGGACTTGGGAGCTGGGGCTGAA  
GTTGCTCTGIACCCATGAACTCCAGTTTGCGAATTATAGAGACAATCTATTTTGTACTTGCACTTGTTATTTCG  
AACCCTGAGAGCGAGATGGGAAGCATAGATATCTATATTTTATTCTACTATGAGGGCCTTGTAATAAATTC  
TAAAGCCTC

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**FIGURE 5160**

GGGCAGGGGCGTGGGCGGGGCGTGGACCAGCCGCGCCGAGCGGGGCCCTCTCCGGGCCGCGTCTGTGGGGTCGAGA  
CTGCGCGGGCCGTTGGGCGTGACGCGGCGCCAGTCGGCGGACGAGGGGCCCCCGGGAGTTGCTGGACTGAGACATG  
AGCCTCCAAC TGTGTGTTGGGCTCGGTAGCACATCGTGGGACTTGGGTGTGCGCCACAGATGGTTTGGCCCTG  
CAGTGACCAGAGCAGCCCAAGCCGCCACCATGGTGAAATTGCTAGTGGCCAAAATCCTGTGCATGGTGGGCGTGT  
TCTTCTTCATGCTGCTCGGCTCCCTGCTCCCCGTGAAGATCATCGAGACAGATTTTGAGAAGGCCCATCGCTCGA  
AAAAGATCCTCTCTCTCTGCAACACCTTTGGAGGAGGGGTGTTTCTGGCCACGTGCTTCAACGCTCTGCTGCCCCG  
CTGTGAGGGAAAAGCTCCAGAAGGTCTTGAGCCTCGGCCACATCAGCACC GACTACCCGCTGGCCGAAACCATCC  
TCCTGCTGGGCTTCTTCATGACCGTCTTCCTGGAGCAGCTGATCCTGACCTTCCGCAAGGAGAAGCCGTCTTCA  
TCGACCTGGAGACCTTCAACGCCGGATCGGACGTGGGCAGCGACTCGGAGTATGAGAGCCCCCTTCATGGGGGGCG  
CGCGGGGCCACGCGCTGTACGTGGAGCCCCACGGCCACGGCCCCAGCCTGAGCGTGCAGGGCCTCTCGCGCGCCA  
GCCCCGTGCGCCTGCTCAGCCTGGCCTTCGCGCTGTGCGGCCACTCGGTCTTTGAGGGCCTGGCCCTGGGCCTGC  
AGGAGGAGGGGGAGAAAGTGGTGAGCCTGTTCTGTTGGGGTGGCCGTCCACGAGACACTGGTGGCCGTGGCCCTGG  
GCATCAGCATGGCCCGGAGTGCCATGCCCCCTGCGGGACGCGGCCAAGCTGGCGGTACCCGTAAGCGCCATGATCC  
CCCTGGGCATCGGCCTGGGCCTGGGCATTGAGAGCGCCCAGGGCGTGCCGGGCAGCGTGGCGTCCGTGCTGCTGC  
AGGGCCTGGCGGGCGGCACCTTCTCTTCATCACCTTCTGGAGATCCTGGCCAAGGAGCTGGAGGAGAAGAGTG  
ACCGTCTGCTCAAGGTCTCTTCTGTTGCTGGGCTACACCGTCTGGCCGGGATGGTCTTCTCAAGTGGTGAG  
CGGCCTCGCCATTGTCCCTGCCGCCGAGCCCGCCGGGAGCCCCGGGCCGGACACAGGCCGCGTCCCCGGCCGC  
GCGTCCCCCAAGAGCGAGCACTGTGGCCCTGGGCCACCACCTGTGCACAAGGGGCCTCCCGGGACCAGGCTGTGC  
CCCCGATCCTACACCCTGAGCCTCAGAGCACTGCTACTTTTAAAATACTTCTTCTCTTAAAGTCTTTACC

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**FIGURE 5161**

GGGCGTCGCGCCCTGGGGCGGGGCCGGGCGGCACCGCGGTGCGCAAGCGCAACCGTCGGTGGGTGCGGGATCGG  
TCGCCTGAGAGGTATCACCTCTTCTGGGCTCAAGATGGACAACAAGAAGCGCCTGGCCTACGCCATCATCCAGTT  
CCTGCATGACCAGCTCCGGCACGGGGGCTCTCGTCCGATGCTCAGGAGAGCTTGGAAAGTCGCCATCCAGTGCCT  
GGAGACTGCGTTTGGGGTGACGGTAGAAGACAGTGACCTTGCGCTCCCTCAGACTCTGCCGGAGATATTTGAAGC  
GGCTGCCACGGGCAAGGAGATGCCGCAGGACCTGAGGAGCCCCGCGCAACCCCGCCTTCCGAGGAGGACTCAGC  
AGAGGCAGAGCGCCTCAAAACCGAAGGAAACGAGCAGATGAAAGTGGAACCTTTGAAGCTGCCGTGCATTTCTA  
CGGAAAAGCCATCGAGCTCAACCCAGCCAACGCCGTCTATTTCTGCAACAGAGCCGAGCCTACAGCAAACTCGG  
CAACTACGCAGGCGCGGTGCAGGACTGTGAGCGGGCCATCTGCATTGACCCGGCCTACAGCAAGGCCTACGGCAG  
GATGGCCCTGGCGCTCTCCAGCCTCAACAAGCACGTGGAGGCCGTGGCTTACTACAAGAAGGCTCTGGAGCTGGA  
CCCCGACAACGAGACATAACAAGTCCAACCTCAAGATAGCGGAGCTGAAGCTGCGGGAGGCCCCCAGCCCCACGGG  
AGGCGTGGGAGCTTCGACATCGCCGGCCTGCTGAACAACCTGGCTTCATGAGCATGGCTTCGAACCTAATGAA  
CAATCCCCAGATTGAGCAGCTCATGTCCGGCATGATTTGCGGTGGCAACAACCCCTTGGGAACCTCCCGGCACCAG  
CCCCTCGCAGAACGACCTGGCCAGCCTCATCCAGCGGGGCCAGCAGTTTGCCAGCAGATGCAGCAGCAGAACCC  
AGAGTTGATAGAGCAGCTCAGGAGCCAGATCCGGAGTCGGACGCCAGCGCCAGCAACGACGACCAGCAGGAGTG  
ACGCTGCCTGCTCCCGGTGTGACCGCGTCTTCCCTGGCCGACCCGAAGGAAGCCTTCTGGTTGTCTGCCACTTC  
CTCCTGTTGGACTGCCTGAGAGAGGGGAAGAGAGAGACCTCGGACCTGCATGTCAAGATGGATTTTCCCCTTTTA  
TCTCTGCCCTCCTCCACTCCCTTTTGTAACTCCCTTACAGCCCCCAGACCCTTCTTGAAACGAGAGCCAGCAAG  
CTGAGCACAGACCAGCAGCGACCTCCCTTCCAGCCCCAGAAAGCTCGGTCACTTGAGTGTTTTCTAGAATCCTG  
GGGTGCTCCCGGGCGCTCTCAGAGAAGTGGCAGGTTTACGTTTCAGCCGTGTGGCGGATCGTGTGGCTTCCAAA  
GCCTTTTACAGCCCCCGCCCCCATCCCGTGGTCTGTCTGCAGGAACCTCTCCCGTCTGTGAGAAGCCTCTTTCCG  
AGTCGACCTCCCGGCCACCCCGCCCTGTGCCTGCTCGGAAGAGCTCACTGCCAGCTGCGGCCTGGGCACCGCGG  
GCCATGTGTGTTTGCATGAGGAACCTCTTGTAGTGGCAGACACCTAAGAGACGGCTGCGGTACCCCCACGCCTCCGC  
GGCTCAGGAGCCGTCTGGGTGCATAGGACCAGTTTCTGTGACTTTTCTCCAGTTGGGCATGTTGACAGACATGT  
TTCCCCTCCTCCACCCCTCATTTTCTGGTCTCTCGGACTGAGAGCCAGGGGCGACATCATGACCTTCTGTCCCGG  
CCGCTTAGCCCCGGGCACAGGGAAGGCAGCTGGGCCGTTTCTGTCTGTGTCCCATCCTGCTGTCTTCTGTCTCT  
GGATGTTTATGGGCCCCGGGGCCCCCAGGGAAGCTTACCCCTCCTGTGCTGGGTGGAGGCCACGGGACACCTCA  
GGTGCCACCCACCTTGGCCCTAAAAACAGCCACCAGGAAAGCAGCCGGAGAGCCGGACAGCAGGCAGCCTGTCTGG  
GTTCTGAGGCCTGGGGGTGGCAGACGAGCCACGGCGCCGTGGTCCCAGCAGCAGGGTTGTAGTCGGAGCATC  
CTGGGGCTCCCTGGCTCTGGCCGTCTGTGAGGTAGGCGCAGTACCGTGTATCGTAGGTAGCAGTAGGAACGGG  
GCCGCCGCGGCCCTGCAGCCGCTCATGGCGGTGAGGTGTGTGCCAAGCCACCCGGGTGCAGGGCGTGACGTGT  
GGGAATAAATAGGCGTTGTGACCTCTAAAAA

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**FIGURE 5162**

MDNKKRLAYAI IQFLHDQLRHGGLSSDAQESLEVAIQCLETAFGVTVEDSDLALPQTLPEIFEAAATGKEMPQDL  
RSPARTPPSEEDSAEAERLKTEGNEQMKVENFEAAVHFYGKAIELNPANAVYFCNRAAAYS KLGNYAGAVQDCER  
AICIDPAYS KAYGRMGLALSSLNKHVEAVAYYKALELDPDNETYKSNLKIAELKLREAPSPTGGVGSFDIAGLL  
NNPGFMSMASNLMNNPQIQQLMSGMISGGNNPLGTPGTSPSQNDLASLIQAGQQFAQQMQQONPELIEQLRSQIR  
SRTPSASNDQQE

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**FIGURE 5163**

GTGGCGGCGGTTGGGCCGAGGCAGGCGGCCCTCAGTGGCCGAGGTGGCTGGACGCGTAGCAGGTGGAAGGAGGGAG  
GGAGCCGCGAGGCGCAGACCCACCCGCCATGAAGCCCCCGCAGCCTGTGCAGGAGACATGGCGGACGCAGCATCT  
CCGTGCTCTGTGGTAAACGACCTGCGGTGGGACCTGAGTGGCCAGCAGATAGAGGAGCGCACCAGGGAGCTCATC  
GAGCAGACCAAGCGCGTGTATGACCAGGTTGGCACCAGGAGTTTGAGGACGTGTCCTACGAGAGCACGCTCAAG  
GCGCTGGCCGATGTGGAGGTACCTACACAGTTTCAAGGAATATCCTTGACTTCCCCCAGCATGTTTCCCCCTCC  
AAGGACATCCGGACAGCCAGCACAGAGGCCGACAAGAAGCTCTCTGAGTTCGACGTGGAGATGAGCATGAGGGAG  
GACGTGTACCAGAGGATCGTGTGGCTCCAGGAGAAAGTTTCAAGGAGTCACTGAGGCCCGAGGCTGCGCGGTAC  
CTGGAGCGGCTAATCAAGCTGGGCCGAGAAATGGGCTTACCTCCCCAGAGAGACTCAGGAAAACATCAAACGC  
ATCAAGAAGAAGCTGAGCCTTCTGTGCATCGACTTCAACAAGAACCTGAACGAGGACACGACCTTCTGCCCTTC  
ACGTCCAGGAGCTAGGAGGGCTCCCGAGGACTTTTGAACCTCCCTGGAGAAGATGGAGGACGGCAAGTTGAAG  
GTACCCCTCAAGTACCCCCATTACTTCCCCCTCCTGAAGAAATGCCACGTGCCTGAGACCAGGAGGAAAGTGGAG  
GAGGCCCTTCAACTGCCGGTGCAGGAGGAGAACTGCGCTATCCTCAAGGAGCTGGTGACGCTGCGGGCCAGAAAG  
TCCCGCTGCTGGGGTTCCACACGCACGCCGACTATGCTCCTGGAGATGAACATGGCCAAGACCAGCCAGACCGTG  
GCCACCTTCTAGATGAGCTGGCGCAGAAGCTGAAGCCCTGGGGGAGCAGGAGCGTGCGGTGATTCTGGAGCTG  
AAGCGTGCGGAGTGCAGCGCCGGGGCTGCCCTTCGACGGCCGCATCCGTGCTGGGACATGCGCTACTACATG  
AACCAGGTGGAGGAGACGCGCTACTGCGTGGACCAGAACCTGCTCAAGGAGTACTTCCCCGTGCAGGTGGTCACG  
CACGGGCTGCTGGGCATCTACAGGAGCTCCTGGGGCTGGCCTTCCACCACGAGGAGGGCGCCAGTGCCTGGCAT  
GAGGACGTGCGGCTCTACACCGCAGGGACGCGGCCCTCGGGGGAGGTGGTCGGCAAGTTCTACCTGGACCTGTAC  
CCGCGGAAGGAAAGTACGGGCACGCGGCCCTGCTTTGGCCTGCAGCCCGCTGCTGCGGCAGGATGGGAGCCGC  
CAGATCGCCATCGCGGCCATGGTGGCCAACCTTACCAAGCCACAGCCGACGCGCCCTCGCTGCTGCAGCATGAC  
GAGGTGGAGACCTACTTCCATGAGTTTGGCCACGTGATGCACCAGCTCTGCTCCCAGGCGGAGTTCGCCATGTTT  
AGCGGGACCCACGTGGAGCGGGACTTTGTGGAGGCGCGTGCAGATGCTGGAGAACTGGGTGTGGGAGCAGGAG  
CCGTGCTGCGGATGTGCGGGCACTACCGCACAGGCAGCGCCGTGCCCCGGGAGCTCCTGGAGAAGCTCATTGAG  
TCCCGGCAGGCCAACACAGGCCTTCTCAACCTGCGCCAGATCGTCTCGCCAAGGTGGACCAGGCCCTGCACACG  
CAGACGGACGCAGACCCCGCCAGGAGTATGCGCGGCTCTGCCAGGAGATCCTCGGGGTCCCGGCCACGCCAGGA  
ACCAACATGCCTGCAACCTTCGGCCATCTGGCAGGTGGTACGACGCCCAGTACTACGGGTACCTGTGGAGCGAG  
GTGTATTCCATGGACATGTTCCACACGCGCTTCAAGCAGGAGGGTGTCTGAACAGCAAGGTGGCATGGATTAC  
AGAAGCTGCATCCTGAGACCCGGCGGTCCGAGGATGCCAGCGCCATGCTGAGGCGCTTCTGGGCCGTGACCCC  
AAGCAGGACGCCTTCTCCTGAGCAAGGGGCTGCAGGTGCGGGGCTGCGAGCCCGAGCCGAGGTCTGCTGAGGC  
CTGGCACTGCGACTGCCAGTCTGGCCTGCGCTCCCGCCGCCCTGGTGCCTAGCCCCGGCACAGGATGGGGCA  
GGCTCTGGCACAGTGCCTGGGACTGGCAGGGTGGCTGAGCGGCTGTCTTGCTCTTGTCAATTGTGTCCCCACC  
CGGTCTGGGCCACCCGGCTAGAGACGGCGTCTCAAGGCATCTGAGGGGCTTTCGTGGCTGCCAGGGCCTGGTC  
TTTGTGCACTAACACGTCTCTCTGGGAAACGTCCCTTGTCAGGAGACGGCTCTTCTTTGAAATGAGGTTCAT  
TAAAGGAAAC



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**FIGURE 5164**

MKPPAACAGDMADAASPCSVVNDLRWDLQAQQIEERTRELIEQTKRVYDQVGTQEFEDVSYESTLKALADVEVTY  
TVQRNILDFFQHVSPSKDIRTASTEADKKLSEFDVEMSMREDVYQRIVWLQEKVQKDSLRPEAARYLERLIKLGR  
RNGHLHPRETQENIKRIKKKLSLLCIDFNKNLNEDTTFLPFTLQELGGLPEDFLNSLEKMEDGKLKVTILKYPHYF  
PLLKKCHVPETRRKVEEAFNCRCKEENCAILKELVTTLRAQKSRLGFGHTHADYVLEMNMAKTSQTVATFLDELAQ  
KLKPLGEQERAVILELKRAECERRGLPFDGRIRAWDMRYMNVQVEETRYCVDQNLKEYFPVQVVTHGLLGIYQE  
LLGLAFHHEEGASAWHEDVRLYTARDAASGEVVGKFYLDLYPREGKYGHAACFGLQPGCLRQDGSRQIAIAAMVA  
NFTKPTADAPSLQHDEVETTFHEFGHVMHQICSQAEEAMFSGTHVERDFVEAPSQMLENWWWEQEPLLRMSRHY  
RTGSAVPRELLEKLIESRQANTGLFNLRQIVLAKVDQALHTQTDADPAEEYARLCQEILGVPATPGTNMPATFGH  
LAGGYDAQYYGYLWSEVYSMDMFHTRFKQEGVLNSKVGMDYRSCILRPGGSEDASAMLRRLGRDPKQDAFLLSK  
GLQVGGCEPEPQVC

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**FIGURE 5165**

CTGGGGGGCTTTTCGGATCGGCAGGATGTACCCCCAGGGAAGGCACCCGACCCCGCTCCAGTCCGGCCAGCCCTT  
CAAGTTCTCGATCTTGGAGATCTGCGACCGCATCAAAGAAGAATTCCAGTTTCTTCAGGCTCAATACCACAGCCT  
CAAGCTAGAATGTGAGAAGCTGGCCAGCGAGAAGACGGAAATGCAGCGACATTATGTCATGTATTATGAGATGTC  
GTACGGGCTCAACATTGAAATGCATAAGCAGGCGGAGATTGTGAAGCGTCTGAGCGGTATCTGCGCTCAGATTAT  
CCCCCTCTGACCCAGGAGCATCAGCAGCAGGTGCTCCAGGCCGTAGAACGCGCCAAGCAGGTACCGTGGGGGA  
GCTGAACAGCCTCATCGGGCAGCAGCTCCAGCCGCTGTCCCACCACGCACCCCTGTGCCCTCACCCCCGCCC  
AGCCGGGCTGGTGGGCGGCAGTGCTACGGGGCTGCTTGTCTGTCTGGAGCCCTGGCTGCCAGGCTCAGCTGGC  
GGCGGCTGTCAAGGAGGACCGTGCGGGCGTGGAGGCCGAGGGGTCCAGAGTGGAGAGAGCCCCGAGCAGGAGTGC  
ATCTCCCTCGCCCCCTGAGAGTCTCGTGGAGGAGGAGCGACCGAGTGGCCCTGGTGGTGGCGGGAAGCAGAGAGC  
AGATGAGAAGGAGCCATCAGGACCTTATGAAAGCGACGAAGACAAGAGTGATTACAATCTGGTGGTGGACGAGGA  
CCAACCCCTCAGAGCCCCCAGCCCGGCTACCACCCCTGCGGAAAGGTACCCATCTGCATTCTGCCGTCGGGA  
CCTGGTGGACAGTCCAGCCTCCTTGGCTCTAGCCTTGGCTCACCGCTGCCTAGAGCCAAGGAGCTCATCTGAA  
TGACCTTCCCGCCAGCACTCCTGCCTCCAAATCCTGTGACTCCTCCCCGCCCCAGGACGCTTCCACCCCCGGGCC  
CAGCTCGGCCAGTCACTCTGCCAGCTTGTGCCAAGCCAGCACCTTCCACGGACAGCGTCGCCCTGAGGAGCCC  
CCTGACTCTGTCCAGTCCCTTACCACGTCCTTACGCTGGGCTCCCACAGCACTCTCAACGGAGACCTCTCCGT  
GCCCAGCTCCTACGTCAGCCTCCACCTGTCCCCCAGGTCAGCAGCTCTGTGGTGTACGGACGCTCCCCCGTGAT  
GGCATTGAGTCTCATCCCCATCTCCGAGGGTCACTCGTCTCTTCTCCCTACCCAGCATCCCTGGGGGAAAGCC  
GGCCTACTCCTTCCACGTGTCTGCGGACGGGCAGATGCAGCCGGTTCCCTTCCCCTCGGATGCACTGGTAGGCGC  
GGGCATCCCGCGGCACGCCCGGCAGCTGCACACGCTGGCCCATGGCGAGGTGGTCTGCGCGGTACCATCAGCGG  
CTCCACACAGCATGTGTACAGGGCGGCAAGGGCTGTGTGAAGGTGTGGGACGTGGGCCAGCCTGGGGCCAAGAC  
GCCCCTGGGCCAGCTCGACTGCCTGAACCGAGACAACCTACATTCTGTTCTGCAAGTTGCTGCCGATGGCCGGAG  
TCTGATCGTGGGCGGTGAGGCCAGCACCTTGTCCATTTGGGACCTGGCGGCGCCACCCCCGTATCAAGGCCGA  
GCTGACTTCTCAGCCCCAGCCTGCTACGCCCTGGCCGTACCCCCGACGCCAAGGTTTGCTTCTCTGCTGCAG  
CGATGGCAACATTGTGGTCTGGGACCTGCAGAATCAGACTATGGTCAGGCAGTTCAGGGCCACACGGACGGCGC  
CAGCTGCATTGATATTTCCGATTACGGCACTCGGCTCTGGACAGGGGGCCTGGACAACACGGTGCCTGCTGGGA  
CCTGCGGGAGGGCCGCCAGCTGCAGCAGCATGACTTCAGCTCCAGATTTTCTCCCTGGGCCACTGCCCTAACCA  
GGACTGGCTGGCGGTCCGAATGGAGAGTAGCAACGTGGAGATCCTGCACGTCCGCAAGCCGGAGAAATACCAGCT  
GCACCTCCACGAGAGCTGCGTGTCTCCCTGAAGTTTGCTCCTGCGGACGTTGGTTTGTGAGCACCGGGAAGGA  
CAACCTGCTCAACGCCTGGAGGACGCCGTACGGGGCCAGCATTTTCCAGTCCAAGGAGTCCTCAGTCCTGAG  
TTGTGACATCTCCAGAAATAACAAATACATCGTGACAGGCTCGGGGGACAAGAAGGCCACCGTGTATGAGGTGGT  
CTACTGAGACATGACCCCC

**FIGURE 5166**

GCCGCAGCTAGCCACAGCCCGGGGGCGCCTCCCGGGGCCCTTGAAGCACTGAGGCACCGAGACTGGTTCTCC  
CCGAGAGACTCGGAAGGTGGGGAACGAGGGGACTGTGTTTGGGGAGGTGGCTTTTTTCGTCTGCTGTTGACTGAAC  
ACTACAGCGCCTGTGGTTCCGGGCTTCGCACAGCTGTCCAGGGATGGATCGCCTGTGCTGCCTTCGCCCGCCG  
CCACACCGGGACCTTCACGGCTGCTTCTGGCCTCGACAGATGACAAAAGAAACAGCCCCAAAATACGACCACT  
CAACCAGCAGTTCGCCCTGCCTGCCGCCACTGTACAGGCTGCCCTGGCCTCCTCGTCCGCAGGGCTGTCTGCT  
GGCTTCTGGGGGCAGAAGAGCGGGGAGCCCCGTGGAAGGTCAGGGGAGACCAGGTGAGGGCAGCTACATTTCTG  
GTGATCAGCCCCATGGGGAGACGGGGCTGGCGGGATACCCCCCCCCGGCTTCCCCACACCACTTCTGTCTCAC  
CGGAAGCGTCCTTTTTTTGTGCCAGGTGTCTACCTAAGAGGGTTGGTGCCAGAAGCCCCCATGGCGAGTGCTGG  
GCCCCGGCGGTGCCCTGGGGGAGCAGATGGGGCCACCCCTGGCAGGGCCGCTACAACCTTTTCCAGCAGCGGAGC  
CCTCTGGGGGGCCTGTGCTTGTGGCATCTCTGAGGGCCTAGATTGCACAAGGTGACCTGGCCGTGGCCTGAGGGT  
GGAGTCGCCCAGCACGCAGGCCGGGGCGCTGCGGGGCTAAGTATTAGGCCTTCCAGGGAGGGGGCGTGCCAAGC  
ATCCAGAGCCGGGCTGGGACCGCCAAAACGTCGTGGCCTGGATCCTCTGGGTCTGAGTGCCTGATCCCCTGCC  
CCAAAAAAGCAGAGGTAGGTGTTGCAGGCCAGGGCAGGGGTGCCTGCCCCAGGAGAGTCCAGGCAGTGTTT  
TCGTGCCAGTGGCACCCAGGGGAAGGACAGCCAACCCCCACCCTTGCCACGTGTGGGGCCACGTGGGCATGTGG  
GGTGTGTGTTTTTACCTTGGTGAATCTCACCTGCCAACGATTTCTCGTGAGTGCCAATGTCCCCAGTGGTGGCA  
GCAGATCCTGTGGCCGCGCTGGCGGACGGGACCCAGTGATACTTGTATATTACAGCTCCTGATTTTCAGACAATT  
TCAACCTTAATCTATTTAAAAAAGAATATTCTATACAAGCTGTTTTTAAGCCTTTTACCATTTGAAATGCATGTG  
TTGTGCGCGTTGGGGATGGGAGGAGGGGCTGAGGAGCGGCTCAGTGTCACCTCCCACAGCCACCGGCCCTGACCC  
TTAATCCAGACACCGATGGAAGTCGACTTTTCATATCTTCTCCTGAAATGAACTCTGTTTTAAATTGGAATAAA  
TTTTGTTCT

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**FIGURE 5167**

MDRLCCLRPPPHRDPARLLLASTDDKRNSPKIRPLQPAVPACLPATVRPALASSSAGLSAGFWGQKSGEPRGRVR  
GDQVRAATFLVISPMGRRGWRDTPPPASPHHFCLTRKRPFVPGVYLRGLVPEAPHGECWGPAVPWGSRWGHPWQ  
GRYNLFQQRSP LGGLCLWHL

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**FIGURE 5168**

GGCCGCCCGGCGCCCCAGCAGCCCGAGCCGGGGCGCACAGCCGGGGCGCAGCCCGCGCCCCCGCCGCGATTGA  
CATGATGTTTCCACAAAGCAGGCATTTCGGGCTCCTCGCACCTACCCAGCAACTCAAATTCACCACCTCGGACTC  
CTGCGACCGCATCAAAGACGAATTTAGCTACTGCAAGCTCAGTACCACAGCCTCAAGCTCGAATGTGACAAGTT  
GGCCAGTGAGAAGTCAGAGATGCAGCGTCACTATGTGATGTACTACGAGATGTCTACGGCTTGAACATCGAGAT  
GCACAAACAGGCTGAGATCGTCAAAGGCTGAACGGGATTTGTGCCAGGTCTGCCCCTACCTCTCCCAAGAGCA  
CCAGCAGCAGGTCTTGGGAGCCATTGAGAGGGCCAAGCAGGTACCCGCTCCCGAGCTGAACTCTATCATCCGACA  
GCAGCTCCAAGCCCACCAGCTGTCCCAGCTGCAGGCCCTGGCCCTGCCCTTGACCCCACTACCCGTGGGGCTGCA  
GCCGCTTCGCTGCCGCGGTCAGCGCAGGCACCGGCCCTCCTCTCGCTGTCCGCGCTGGGTTCACAGGCCACCT  
CTCCAAGGAAGACAAGAACGGGCACGATGGTGACACCCACCAGGAGGATGATGGCGAGAAGTCGGATTAGCAGGG  
GGCCGGGACAGGGAGGTTGGGAGGGGGACAGAGGGGAGACAGAGGCACGGAGAGAAAGGAATGTTTAGCACAAG  
ACACAGCGGAGCTCGGGATTGGCTAAACTCCCATAGTATTTATGGTGGCCGCCGGCGGGGGCCCCAGCCAGCTT  
GCAGGCCACCTCTAGCTTTCTTCTACCCCATTCGGGCTTCCCTCCTCCTCCCTGCAGCCTGGTTAGGTGGAT  
ACCTGCCCTGACATGTGAGGCAAGCTAAGGCCTGGAGGGTCAGATGGGAGACCAGGTCCCAAGGGAGCAAGACCT  
CGCGAAGCGCAGCAGCCCCGGCCCTTCCCCGTTTTGAACATGTGTAACCGACAGTCTGCCTGGGCCACAGCCCT  
CTCACCTGGTACTGCATGCACGCAATGCTAGCTGCCCCCTTCCCGTCTGGGCACCCGAGTCTCCCCGACCC  
CGGGTCCCAGGTATGCTCCACCTCCACCTGCCCCACTCACACCTCTGCTAGTTCCAGACACCTCCACGCCAC  
CTGGTCTCTCCCATCGCCCAAAAAGGGGGGCACAGGGACGAGCTTAGCTGAGCTGGGAGGAGCAGGGTGAG  
GGTGGGCGACCCAGGATTCCCCCTCCCCTTCCCAAATAAGATGAGGGTACT

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**FIGURE 5169**

ATGGACCAGGACTATGAGCGGCGCCTGCTTCGCCAGATCGTCATCCAGAATGAGAACACGATGCCACGCGTCACA  
GAGATGCGGCGGACCCTGACGCCTGCCAGCTCCCCAGTGTCCTCGCCCAGCAAGCACGGAGACCGCTTCATCCCC  
TCCAGAGCCGGAGCCAACCTGGAGCGTGAACCTCCACAGGATTAACGAGAATGAGAAGTCTCCCAGTCAGAACCGG  
AAAGCCAAGGACGCCACCTCAGACAACGGCAAAGACGGCCTGGCCTACTCTGCCCTGCTCAAGAATGAGCTGCTG  
GGTGCCGGCATCGAGAAGGTGCAGGACCCGCAGACTGAGGACCGCAGGCTGCAGCCCTCCACGCCTGAGAAGAAG  
GGTCTGTTACGTATTCCCTTAGCACCAAGCGCTCCAGCCCCGATGACGGCAACGATGTGTCTCCCTACTCCCTG  
TCTCCCGTCAGCAACAAGAGCCAGAAGCTGCTCCGGTCCCCCGGAAACCCACCCGCAAGATCTCCAAGATCCCC  
TTCAAGGTGCTGGACGCGCCGAGCTGCAGGACGACTTCTACCTCAATCTGGTGGACTGGTCGTCCCTCAATGTG  
CTCAGCGTGGGGCTAGGCACCTGCGTGACCTGTGGAGTGCTGTACCAGCCAGGTGACGCGGCTCTGTGACCTC  
TCAGTGGAAGGGGACTCAGTGACCTCCGTGGGTGGTCTGAGCGGGGGAACCTGGTGGCGGTGGGCACACACAAG  
GGCTTCGTGCAGATCTGGGACGCAGCCGCAGGGAAGAAGCTGTCCATGTTGGAGGGCCACACGGCACGCGTCGGG  
GCGCTGGCCTGGAATGCTGAGCAGCTGTCGTCCGGGAGCCGCGACCGCATGATCCTGCAGAGGGACATCCGCACC  
CCGCCACTGCAGTCGGAGCGGCGGCTGCAGGGCCACCGGCAGGAGGTGTGCGGGCTCAAGTGGTCCACAGACCAC  
CATCTCCTCGCTCGGGGGGCAACGACAACAAGCTGCTGGTCTGGAATCACTCGAGCCTGAGCCCCGTGCAGCAG  
TACACGGAGCACCTGGCGGCCGTGAAGGCAATCGCCTGGTCCCCACATCAGCACGGGCTGCTGGCCTCGGGGGGC  
GGCACAGCTGACCGCTGTATCCGCTTCTGGAACACGCTGACAGGACAACCACTGCAGTGTATCGACACGGGCTCC  
CAAGTGTGCAATCTGGCCTGGTCCAAGCACGCCAACGAGCTGGTGAGCACGCACGGTTACTCACAGAACCAGATC  
CTTGCTGGAAGTACCCCTCCCTGACCCAGGTGGCCAAGCTGACCGGGCACTCCTACCGCGTGCTGTACCTGGCA  
ATGTCCCCTGATGGGGAGGCCATCGTCACTGGTGTGGAGACGAGACCCTGAGGTTCTGGAACGTCTTTAGCAAA  
ACCCGTTGCACAAAGGTAAAGTGGGAGTCTGTGTCTGTGCTCAACCTCTTACCAGGATCCGGTTAA

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**FIGURE 5170**

MDQDYERRLLRQIVIQNENTMPRVTEMRRILTPASSPVSSPSKHGDRFIPSRAGANWSVNFHRINENEKSPSQNR  
KAKDATSDNGKDGLAYSALLKNELLGAGIEKVQDPQTEDRRLQPSTPEKKGLFTYSLSTKRSSPDDGNDVSPYSL  
SPVSNKSQKLLRSRKPTRKISKIPFKVLDAPELQDDFYLNLDWSSLNVLSVGLGTCVYLWSACTSQVTRLCDL  
SVEGDSVTSVGWSEGRNLVAVGTHKGFVQIWDAAAGKKLSMLEGHTARVGALAWNAEQLSSGSRDRMILQDIRT  
PPLQSEERRLQGHRQEVCGWKWSTDHLLASGGNDNKLLVWNHSSLSPVQQYTEHLAAVKAIAWSPHQHGLLASGG  
GTADRCIRFWNTLTGQPLQCIDTGSQVCNLAWSKHANELVSTHGYSQNQILVWKYPSLTQVAKLTGHSYRVLYLA  
MSPDGEAIVTGAGDETLRFWNVFSKTRSTKVWESVSVLNLFTIR

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**FIGURE 5171**

TTTCCCGAGATCACCAAGATGCTGGGCGCCGAGTGGAGCAAGCTGCAGCCAACGGAAAAGCAGCGGTACCTGGAT  
GAGGCCGAGAGAGAGAAGCAGCAGTACATGAAGGAGCTGCGGGCGTACCAGCAGTCTGAAGCCTATAAGATGTGC  
ACGGAGAAGATCCAGGAGAAGAAGATCAAGAAAGAAGACTCGAGCTCTGGGCTCATGAACACTCTCCTGAATGGA  
CACAAGGGTGGGGACTGCGATGGCTTCTCCACCTTCGATGTTCCCATCTTCACTGAAGAGTTCTTGGACAAAAC  
AAAGCGCGTGAGGCGGAGCTTCGGCGCTTGCGGAAGATGAATGTGGCCTTCGAGGAGCAGAACCGGCTACTGCAG  
AGGCAAAACGCAGAGCATGAGCAGCGCGCGAGCGTCTGGAGCAGGAGCTGGCGCTGGAGGAGCGGAGGACGCT  
GGCGCTGCAGCAGCAGCTCCAGGCCGTGCGCCAGGCGCTCACCGCCAGCTTCGCCTCACTGCCGCTGCCGGGCAC  
GGGCGAAACGCCCACGCTGGGCACTCTGGACTTCTACATGGCCCCGGCTTCACGGAGCCATCGAGCGCGACCCCGC  
CCAGCACGAGAAGCTCATCGTCCGCATCAAGGAAATCCTGGCCCAGGTCGCCAGCGAGCACCTGTGAGGAGTGGG  
CGGGCCCCACGATGCAGAGGAGAAGCTGTGGGCGCGGCCCTGCCACACCCACCCCGTGGACGAGAGGCTGGGGGT  
CCACCCTTTGGGGCCTGGTCCCATCCTGCACCTTTGGGGGCTCCAGCCCCCTAAAATTAAATTTCTGCAGCATC  
CCTTTAGCTTTCAATCTCCCCAGCCCCCTGAACCCGAAAAAGCACTCGCTGCGCGATACACCCAGAAGAACCTC  
ACAGCCGAGGGTGCCCCCTCCTCGGAGGACAGCCACGCGCTACACTGGCTCTCCGGGCCACCCCAAGACACAGGG  
CAGACGAAACCCACCCCAAGCACACGGCAGGACCCCCAAATTACTACTACGGGGGGCTGTGCCATAGGCCACA  
CAGGAAGCTGCCTTGTGGGGACTTACCTGGGGTGTCCCCCGCATGCCTGTACCCCAAGATGGGTGGGGGCCGGCTT  
TGCCCATCCTGCTCTCCTCCAGCCGAGGGACCCCTGGTGGGGGTGGCTCCTTCTCACTGCTGGATCCGGACTTTTT  
AAATAAAACAAGTAAATTTGTGTTTTAAAA



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**FIGURE 5172**

MLGAEWSKLQPTKQRYLDEAEREKQQYMKELRAYQQSEAYKMCTEKIQEKKIKKEDSSSGLMNTLLNGHKGDC  
DGFSTFDVPIFTEEFLDQNKAREELRRLRKMNVAFEEQNAVLQRQNAEHEQRARASGAGAGAGGAEDAGAAAAA  
PGRAPGAHRQLRLTAGAGHGRNAHAGHSGLLHGPPASRSHRARPRPAREAHRPHQGNPGPGRQRAPVRSGRAHDAE  
EKLWARPCHTPPRGREAGGPPFGAWSHFAPLGAPAPLKLNFCSIPLAFNLPSPLNPEKALAARYTQKNLTAEGAP  
PRRTATRYTGSPGHPQDTGQTKPTPSTRQDPPNYSRLRGAVP

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## FIGURE 5173

GCGCCAGGCCCGCTGGGGCAGGTGTCCCGTGGAAATCGACGGAGGGGCTGCCGTGGGCGGCCGTGACAGTCACAG  
AGAGGGGAAGAGAAAACAGGGACGGTGACACACACAGAGAGAAGGAAGAGCAGACAGAGGCACAGCAGGAGACCC  
CCCCAAGCCCCGAGGAGGACAGCCTGGGGATGCAGAGCACATGCCGGCCCCAGTGAGGGGAACCGATTTCGCCGA  
GCCGGGAGGCAAGCCTGGGGCTCCCTGCCCTGTCCCTGCCCGTAGCCCCCAGCCGTCTCCCCACCATCTGTC  
CCGTGCCGTCCACACAGGTGGGAGCCATGTTCTGAGCCCCGGGCGAGGGGCCGCAACCGAGGGTGGGGGTCTG  
GGGCCGGGCGAGGAGGCCCAAGAAGAAGCACCGGAGGAACCGACCACTTCACCACCTACCAGCTGCACCAG  
CTGGAGCGGGCGTTTCGAGGCCTCTCACTACCCGGATGTGTACAGCCGTGAGGAGCTGGCAGCCAAGGTGCACCTA  
CCTGAGGTGCGCGTGCAGGTGTGGTTCCAGAACCGCCGGGCCAAGTGGCGCCGCCAGGAGCGGCTGGAGTCAGGC  
TCGGGTGCCGTGGCAGCTCCGAGACTCCCCGAGGCCCGACGCGTTCGCCCTTCGCCCCCCCCCGGCCATGTCGCTG  
CCCCTGAGCCCTGGTTGGGCCCCGACCGCCGGCCGTGCCAGGCCTCCCCCGCCTCCTGGGCCCCGGCCCCGGG  
CTGCAAGCGTCTTCGGGCCTCATGCTTTGCTCCCACCTTCGCAGATGGCTTCGCCCTGGAGGAGCGTCCCTG  
CGGTGCTGGCCAAGGAACATGCACAGGCTCTGGACAGGCGCTGGCCGCCAGCCTGAGCCCTGCCGCCCTCCCCGG  
CCCCCTCCTCGGCCAACCCGAGAACCAGGGGACGTGCCCTGGTGACAGCCACCACGCTTGCCCTAGGCCGAGGT  
CATGGAGCAACCGTGGTCAGGCCAGGCCACCACCACTGGGAGCGGGACCAGAGAGACAGGCTGCTGGGTTCCCT  
GCCCCATCCCGTCTCCACCCCATGCCACCCGTCCTGCTGGCAGCGGACTGGCCCCAGTGTGAGGCAGGAGG  
TGACCAAGTATTCTCAGGCCAGGTGCGGGGACCTCCTCCCTCCTGGGGCTCAGTCTCCTGCTGTAAATTGG  
GCGTGGGGGCTCCGAGGTTCGAGGGCTGCGAGGCTGTGGGTGGCGGGACCGCTGACTCTGTAAGATGAGTGTA  
ATCTCTCTGCTTCTCCTAATCCCCATCAGCAGAGCTGCCACTCTCCAGGCTCCAGTCCCCCTGGAAATAACAAA  
TAGCAGCAGCTCCCGCAGCCTGGTCTCCTCTCACCCTGTGCTCGCCATGTGAGCACTCCCTCTCCGTTGTGCC  
CTGGACCTCGGGCAGCTGTGAGCCATTCTATAGAGAGGGAAACCGGGGCTTAGGCAGGAAGCCAGGTCCCCA  
AAGTCGCACGGCCAGGAGTGGATGGAGCTGCCTTTAGACCCATCACCAGTCTTACCGTCCGGGGCACAGCGACA  
GGTTCTGGAGAGAGGGTGGGTCCCGGGCCAGGTGCTGCTGGGCTCCAGGTGGAGGCGGGCTGATGCTGGGTGTG  
TCGTATCGCTCAGACCGTTCCTCACGTCCCCACAGACCCAGGCCCTGTGCTATGTCAGTGGAGGCATGGCCA  
GCATCTGCTCTGTCCAACCCAGTCGCATCGCCAAGAGCTCTGAGCAAGGAGGCTGTGCGGGGCGGAGAACCCG  
CTGGGACTGGCAAGCACGGCTGGCCAGTGCAGCAGGAGGGGGCCCTGAGGCATGGGATGGGACAGTCTGGGCA  
GCGCCACCTCCCGGGACAGAAGTGGGACACAGGGCAGGAGCTGCAGTAGCTACCTCCCCGTCTCCAGCCTGGG  
CTCCCCAGATCACTCCAGATCACCAGGTACCCCATCTCTAGGCGGCACCTCACACACAGTCTGTGGTCCAA  
CGCCCCGCCATACCCAAATGTACCGCACACCAGGCAGTGGGGACACGGCAGTAAGCACAAGAAAGATTTTTTTT  
TTTTTAAAGCTAAACCAGGCCAGGTGCGGTGGCTCATGCTGTAATCCAGTGCTTTGGGAGGCTGAGGTGGGAG  
GATTGCTTGAGACCAGCTGGGTGACACAGCAAGACCCATCTCCACAAACGTTTTTAAATGTGCCGGGTGTAC  
TGGTGACACCTGTCTCCAGCTACCCAAGAAGCTGAGGCAAGAGGATCACTTGAGCCCAGAAGGTGAGGCTG  
CAGGGAGCTGTGATCACACTGCTGCACTCCAGCCTGTGCAACAGAGCCAGACCTGACTCAATACAAATAAAAA  
CAAATCTAAACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5174**

MFLSPGEGPATEGGGLGPGGEEAPKKKHRRNRRTFTTTYQLHQLERAFAESHYPDVYSREELAAKVHLPEVRVQVWF  
QNRRAKWRRQERLESGSGAVAAPRLPEAPALPFARPPAMSLPLEPWLGPGPFAVFGLPRLLGPGPGLQASFGPHA  
FAPTFADGFALEEASLRLLAKEHAQALDRAWPPA

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**FIGURE 5175**

GGCCGGCGGGCGGGCGGGCGGGCGGGAGGAGACCGCAGTGCGGCCGGCGCTAGGACCCGCGGGGGCCTCCAGGCC  
GCGGCGCCTCCCGCTTTCCCCACTCCCCGACCCTTCTTCGCCCCCAAATGAGGAAACGGAGCAACTCGCTCCA  
AGTTGTGCAGCCGGGACCGCCTCGGGGTGTGCAGCCGGCTCGCGGAGGCCCTCCTGGGGGCGGGCGGGGGCGCG  
GCTCGGGGGCGCCCCCTGAGCAGAAAACAGGAAGAACCAGGCTCGGTCCAGTGGCACCCAGCTCCCTACCTCCTG  
TGCCAGCCGACTGGCTGTGGCAGGCCATTCCAGCGTCCCCGACTGTGACCACTTGCTCAGTGTGCCTCTCACC  
TGCTCAGTTTCCCTCTGGGGGCGATGGCGGGGCGAGGCTCTCTGGTTTCTGGCGGGCATTTCACGGCTGTGAT  
TCTGCTGAGGAACTTCCCCGGGTGAGCCCCGCTTCTCCGAGCCTGGCACCCCCCTCCCGTCTCAGCCAGGATG  
CCAACGAGGCGCTGGCCCCGGGCACCCAGTGTATACCAAATGCGAGCACACCCGCCCCAAGCCAGGGGAGCTG  
GCCTTCCGCAAGGGCGACGTGGTCACCATCCTGGAGGCTGCGAGAACAAGAGCTGGTACCGCGTCAAGCACCAC  
ACCAGTGGACAGGAGGGGCTGCTGGCAGCTGGGGCGCTGCGGGAGCGGGAGGCCCTCTCCGAGACCCCCAAGCTC  
AGCCTCATGCCGTGGTTCCACGGGAAGATCTCGGGCCAGGAGGCTGTCCAGCAGCTGCAGCCTCCCGAGGATGGG  
CTGTTCTGGTGCGGGAGTCCGCGCGCCACCCGGCGACTACGTCTGTGCGTGAGCTTTGGCCGCGACGTCATC  
CACTACCGCGTGTGCAACCGCGACGGCCACCTCACAATCGATGAGGCCGTGTTCTTCTGCAACCTCATGGACATG  
GTGGAGCATTACAGCAAGGACAAGGGCGCTATCTGCACCAAGCTGGTGAGACCAAAGCGGAAACACGGGACCAAG  
TCGGCCGAGGAGGAGCTGGCCAGGGCGGGCTGGTTACTGAACCTGCAGCATTGACATTGGGAGCACAGATCGGA  
GAGGGAGAGTTTGGAGCTGTCTGCAGGGTGAGTACCTGGGGCAAAAGGTGGCCGTGAAGAATATCAAGTGTGAT  
GTGACAGCCCAGGCCCTTCTGGACGAGACGGCCGTATGACGAAGATGCAACACGAGAACCCTGGTGCCTCTCCTG  
GGCGTGATCCTGCACCAGGGGCTGTACATTGTCTATGGAGCACGTGAGCAAGGGCAACCTGGTGAACCTTCTGCGG  
ACCCGGGGTTCGAGCCCTCGTGAACACCGCTCAGCTCCTGCAGTTTTCTCTGCACGTGGCCGAGGGCATGGAGTAC  
CTGGAGAGCAAGAAGCTTGTGCACCGCGACCTGGCCGCCCGCAACATCCTGGTCTCAGAGGACCTGGTGGCCAAG  
GTCAGCGACTTTGGCCTGGCCAAAGCCGAGCGGAAGGGGCTAGACTCAAGCCGGCTGCCCGTCAAGTGGACGGCG  
CCCGAGGCTCTCAAACACGGGAAGTTACCCAGCAAGTCGGATGTCTGGAGTTTGGGGTGCTGCTCTGGGAGGTC  
TTCTCATATGGACGGGCTCCGTACCCTAAATGTCACTGAAAGAGGTGTCGGAGGCCGTGGAGAAGGGGTACCGC  
ATGGAACCCCCGAGGGCTGTCCAGGCCCGTGCACGTCTCATGAGCAGCTGCTGGGAGGCAGAGCCCGCCCGC  
CGGCCACCCTTCCGCAACTGGCCGAGAAGCTGGCCCGGGAGCTACGCAGTGCAGGTGCCCCAGCCTCCGTCTCA  
GGGCAGGACGCCGACGGCTCCACCTCGCCCCGAAGCCAGGAGCCCTGACCCACCCGGTGGGGCCCTTGGCCCCA  
GAGGACCGAGAGAGTGGAGAGTGGGCGTGGGGGCACTGACCAGGCCCAAGGAGGTCCAGGCGGGCAAGTCATC  
CTCCTGGTGGCCACAGCAGGGGCTGGCCACGTAGGGGGCTCTGGGCGGCCCGTGGACACCCAGACCTGCGAAG  
GATGATCGCCCGATAAAGACGGATTCTAAGG

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**FIGURE 5176A**

GGAAAGCCGAGCCTCTGCCAGCCCTGAGCTGGGAAGAAGCAGCTACCTCGGAGGCAGGGCGCGCAGGCGGGCGGCG  
ATGAGAGGGGGCGCAGCCGCAGCCCCGCGCTGGGGAGCCCACCGCTAACCTGCACCCACCCACCCCTGCACAA  
AAGAGCTGGCGGGCGCTGGCCACGTCGCCCTGGGTGACCTTCCTCGGATGCAGAATCCGCCCTGCGAGCATCCT  
CTTCCTCTAGGCTCTGAAGGCCCCGGGAGCGTGAGCGATGCCAGCTGCACCCGGGCAGGGCTCGCCTTTGTTT  
GCCAGTAAGGAGGAGAGGCTGTCTCAGCTGCAGAGGGGTATCCCTGCTTCAAGCCAGTGCCTCTTCCAGCTCC  
CATGGGGACCACCGAAGCCACGCTCCGGATGGAACAGTGACGTGAAGGAGGAATGGCAGGACGAAGATCTTCC  
CAGGCCACTCCCAGAAGAGACGGGGGTGGAAGTGTGGCAGCCCGGTGGAGACACATCCTCTCCTCCCAACAC  
GCTAAATTTCAACGGAGCGCATCGTAAGAGGAAGACGCTGGTGGCCCCAGAGATCAACATTTCTTGATCAGAG  
TGAGGGGTCCCTGCTGTCCGATGACTTCTTGATACCCCTGATGACCTGGATATTAACGTGGATGACATCGAGAC  
CCCCGATGAGACCGACTCGCTGGAGTTCTTGGGAATGGCAACGAAGTGGAGTGGGAAGACGACACCCCGTGGC  
CACCGCCAAGAACATGCCCGGGGACAGCGCGGATCTATTGGGGACGGCAGCAGCGGAGGACGGCAGCGCCGCCAA  
CGGGCGCTGTGGCGGACAGTGATCATCGGGGAGCAAGAGCACCGTATAGACCTGCACATGATCCGGCCTTACAT  
GAAAGTGGTCACCCACGGAGGGTACTACGGCGAAGGCTCAACGCCATCATCGTCTTCGACGCTGCTTCTTCC  
AGACAGCAGCCTCCCCGACTACCACTACATCATGGAGAAGCTCTTCTGTACGTATCAGCAGCTTAGAGCTCCT  
GGTGGCTGAGGACTACATGATCGTGTACCTGAACGGTGCCACGCCCCGGCGGAGGATGCCTGGAATCGGCTGGCT  
GAAGAAGTCTACCATGATCGACCGAGGTTGCGGAAAAACCTGAAGTCTTGATCATCGTCCACCCCTCGTG  
GTTTATTTCGGACTGTGCTGGCCATCTCTCGCCCTTTTCATCAGCGTCAAGTTTCATCAACAAGATCCAGTACGTGCA  
CAGCTTGGAAGACCTGGAGCAACTCATCCCTATGGAACACGTCCAGATCCCAGACTGCGTCTGCAATACGAAGA  
GGAAAGACTGAAGGCGAGGGGAGAGCGGAGGCCCCAGCCGGAGTTTGTGCTGCCAGGTCTGAAGAGAAGCC  
AGAGGTGGCACCAGTGGAAAAAGGCTGTCTGCTGTCTCAGAAGATCAGGAAAAAGCATGTCTTGAGGCGACGT  
GAGCATAACAAAGGACATGGAAGAAGATTCCAGATGCCAGAAAACTCTGTACAGCGCCACTGGCCCCAGATCT  
CATCTGCCTCATCTGAGTCCCAATCTTCCAAGGGTGCCAGCCCCCTCCGTTTCATCTCTGAAACCCAGCATCCTT  
TTCAGTGTCTTGAAGCAATTGTATTTTTTTTTTTTAAACGATGCAGTATTGTGCGTTCCAGAAAAAGGGCCAGCT  
CTGAGCCCCCTCACCTTCCACACTACGAAGTCTCAGCCGAGGAAGGCAAGAAGCGCAGGGGGTGGCCCGCTGG  
CGTCGGTGGCCTCCGCTCCTGCTCGCAGCCTCTGTGGTTCAGAGCTGGATACAAGATTCAAGACCCCTTCTCTGCT  
TGTCACCCGCTCCAGGTTGGAGCCACAGACACCCACCGCCACCCCGGCTGGGTCTGCGTCTTTCTGTGCTTT  
CCCTCCAGAATGCGGCTCAGACCTAGAAGCTCAACCCCTATGAGGGCCACGTCCTGGGGTAGCTCCTGACCT  
CCGACCTTATGTCCAAATTTACACCCATGGTTTTTCAATTTGACCCGCCCCCTTCTCGCTCATAATGACACCCAG  
CTCCTTTGAGAGGATCAGAGCCCATTCACAAAGAGCGCTGCCAACCATCCTTGTCTCCGATTGCAAAATG  
ACACCCAGTAATCTAGAACATTCTCAAGCCCTTTAACTCAGATGTCAAGCCACCGGGCAAACCCCGTCAATAC  
CTCCACCAAGGAATGAGATATGTGGACCTCACTGTCCCCAACCCAGCGTCAGGCTGGGACACGCCAACGCTG  
TTCCGGGTGGAAACAGCAGAGGCTCAGAACTGGCTCTGAAATAGGCAGACCTAGCAAGAGGAAGATACAGGGTA  
TCGGGCGTTTGAGTGTTCAGAAGTCATTCCGGAAGATAAATCCAGTGCCTGGCCGAGCCACCTGCATTCAA  
GCTTGAGACCAGCGGTTCTTGTTCGGGAGGCAAAATTCCTAGGAAAAAGAAGACAGACTTTTCTAATGTGGTCC  
AAATGCGGATCACTGGTCAGATGGACTCTAGAAGCACTGAGCTCCTGTCTCTGGAAGTATTTAAGAAAAGGCTG  
GGCCAGGCACGATGGCTCACGCTGTAAATCCAGACTTTGGGAGGCGGAGGCAGGCGGATCACCTGAGGTGAGGA  
GTTTGAGAACAGCCTGGCCAAACATGGTGAACCTCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGGC  
AGGTGCTGTAAATCCAGCTACTTGGGAGGCTGAGGCATGAGAATCACTTAAACCTGAGAGGCAGAGGTTACAGT  
GAGCCAAGATCGTGCCACTGCATTCCAGCCTGGGCGACAGAGCAAGACTCTGTCTCAAAAAAATAAAAAATAAT  
CAGGGCACAGTGGCTCATGCTGTAAATCCAGCACTCTGGGAGGCTGAGGTGGGTGGATCACCTGAGGTGAGGAG  
TTCAAGACCAGCCTGGTGAACATGGCGAAACCCGCTCTCTAATAAAAAATACAAAAATTAGCCGGGCATGGTGGT  
CATGCTGTAAATCCAGCTACTCGGGAGGCTGAGGCAGGAGAACTGCTTGAACCCAGGAGGCAGAGGTTGCAGTG  
ATCCAAGATCATGCCACTGCACTCCAGCCTGGGCAACAAGAGCAAACTCCGTCTCAAAATAAAAAGAAAAGAAA  
AGAATGGACAGTGTGTCAGAGAGTTGCTCACGAGTTTCCCTCTAATCTAATGTCTTCATGTCTATCAGTCTG  
AGCAGACGGTGAGTAGGGCGGGCACATTCTCCAGGCCCTTCTCTAGCTCTGTGGTTGACCTCTCAGCAAGTGC  
TATCCAGGCTGGGCAACCCAGACCCACAATTAAGTGGCTCAGTGAAGCGTCCAGTGCATCTTGACCTGAGAC  
AGCAAGGAATTGCATTGTTGGGTTATTCCAACGATGATGGCAGGGAAGTGGTGGTATTAGTGCTGAGGGGCAGTG  
ATACAGAAAGATTTGCCCTGTGGGACAGGGTCTGCGCGAGTCCCATCCCCAAAGCCAGCAGCTCCTGCCATGA

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**FIGURE 5176B**

GGAAGACGGGGTTTCTGAGCAGGCTTATGCCTGCAGGTTCTGTGGAGCCACCGGCTGTGACGGGACACCTCTGG  
GTCTCAGCATTGCCCTGGGGAGGCTGGGACATTTAGGGACATGGTAGGGTTTTAACATTGTTTCCCAAATGTCA  
AATCCCGGGCACAGGGGCAAGACCTGTCCCGAATTCCCACCCAGTGAATGGTGTGCTGCGTGCCAAAGCCAACACA  
AGATGACAAAAGTGGCTGGGTACGGTGGCTCACGCCATATAATCCCAGCACTTTGGGAGACCGAGACAGGTGGATC  
ACCTGAGGTGAGGAGTTCGAGACCAGGCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAATTAG  
CTGGGTGTGGTGGCGCGCACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGTAGAAGAATAGCTGGAACCCAGGAG  
GCAGAGATTGCAGTCAGCCGAGATTGCACCACTGCACTCCAGCCTGGGAGACAGAGCAAGACTGACTCAAAAGAA  
AAAAAATGACAGAAGCCTGATTATCAGACTGCCCGGAGGAGACAGGCTCCAGCAGATAGATGCCAGCCAGGCCCA  
GCTGCCACGATTTGTCCCAGGTGACCAAAGGCACGCAGCTCCAGCATGAATCGTTCTAACCCAACAGTGACAAGA  
ACTGCTGGGCCTTAACCGTTCATGGAAGACTGGGGCCGCTTCCAAGTCACAGACAGGAGACGGGGACAGGAAAGAA  
CTCATTCCACCCAATCGGACACCTAATAATTGAGTGTCTACAGCAGCAATCAAGTGACAAGTGAGGCCCTACCTG  
ACCCAGAAGGTGCCTGCCGGCTAAACATTCTGCCCCCACCAGAACTCCAGGGGGTCCGCCCCGTTATGCCGTGGC  
CCACCCACGCCCCCTTTGGATCACCAGCAGTCACAGACAACAGGCAGGCGAAACTGAAGACCCCAACTCAGCCCCA  
GCGGACCCTCCAGAGCAAAAGAGGCCCGCGCAGGCCACCTGTGCGCAGGCATGCCGAGGTCAAACAGCCGGGG  
CCACCGTTCCCAGCTGGGCCACGACCTGCACCGTCCACAGATGGGCTTTGAGATGGATTGTATCAGGGTGGGGG  
GTGTGGTTTGGCCAAAATGCAATGGACCCCGACCCCTCCTCGTAAAAGGATGTTGGGTTTCCCTCTGGTGACACA  
TGGGATGCGTCATAAACCTCCCCCAAAGTCTGTGTCAGCAGCCCATCCTTCCAACGATGAGTTTTGCGGTTTTT  
CAGAACAGAAATGATCACTACGATTGACGACGGTCGTGATGTTAAGACGTCGTCTCCATGAGCTTTGGGGGGACT  
TTTATGTGAATAAAAGAACTATCACTG

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**FIGURE 5177**

MGITTEATLRMENVDVKEEWQDEDLPRPLPEETGVELLGSPVEDTSSPPNTLNFNGAHRKRKTLVAPEINISLDQS  
EGSLLSDDFLDTPDDLDINVDDIETPDETDSEFLGNGNELEWEDDTPVATAKNMPGDSADLFGDGTEDGSAAN  
GRLWRTVIIGEQEHRIDLHMIRPYMKVVTHGGYYGEGLNAIIVFAACFLPDSSLPDYHYIMENLFLYVISSLELL  
VAEDYMIVYLNATPRRRMPGIGWLKKCYQMIDRRLRKNLKSIIIVHPSWFIRTVLAI SRPFISVKFINKIQYVH  
SLEDLEQLIPMEHVQIPDCVLQYEEERLKARRESARPQPEFVLP RSEEKPEVAPVENRSALVSEDQETSMS

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## FIGURE 5178

ATGGTTAATTTTACGGTGGATCAGATCCGCGCCATCATGGACAAGAAGGCCAACATCCGCAACATGTCTGTCATC  
GCCACGTGGACCATGGCAAGTCCACGCTGACAGACTCCCTGGTGTGCAAGGCGGGCATCATCGCCTCGGCCCGG  
GCCGGGGAGACACGCTTCACTGATACCCGGAAGGACGAGCAGGAGCGTTGCATCACCATCAAGTCAACTGCCATC  
TCCCTCTTCTACGAGCTCTCGGAGAAAGACTTGAACCTTCATCAAGCAGAGCAAGGACGGTGCCGGCTTCTCATC  
AACCTCATTGACTCCCCCGGGCATGTGACTTCTCCTCGGAGGTGACTGCTGCCCTCCGAGTCACCGATGGCGCA  
TTGGTGGTGGTGGACTGCGTGTGTCAGGCGTGTGCGTGCAGACGGAGACAGTGTGCGGCAGGCCATTGCCGAGCGC  
ATCAAGCCTGTGCTGATGATGAACAAGATGGACCGCGCCCTGCTGGAGCTGCAGCTGGAGCCCCGAGGAGCTCTAC  
CAGACTTTCAGCGCATCGTGGAGAACGTGAACGTCACTCATCTCCACCTACGGCGAGGGCGAGAGCGGCCCATG  
GGCAACATCATGATCGATCCTGTCTCGGTACCGTGGGCTTTGGGTCTGGCCTCCACGGGTGGGCCTTACCCTG  
AAGCAGTTTGCCGAGATGTATGTGGCCAAGTTCGCCGCCAAGGGGGAGGGCCAGTTGGGGCCTGCCGAGCGGGCC  
AAGAAAGTAGAGGACATGATGAAGAAGCTGTGGGGTGACAGGTACTTTGACCCAGCCAACGGCAAGTTTCAGCAAG  
TCAGCCACCAGCCCCGAAGGGAAGAAGCTGCCACGCACCTTCTGCCAGCTGATCCTGGACCCCATCTTCAAGGTG  
TTTGATGCGATCATGAATTTCAAGAAAGAGGAGACAGCAAACTGATAGAGAACTGGACATCAAACTGGACAGC  
GAGGACAAGGACAAGAAGGCAAACCCCTGCTGAAGGTGTGATGCGCCGCTGGCTGCCCTGCCGGAGACGCTTG  
TTGACAGATGATCACCATCCACCTGCCCTCCCTGTGACGGCCCAAGTACCGCTGCGAGCTCCTGTACGAGGGG  
CCCCCGGACGACGAGGCTGCCATGGGCATTAAGGCTGTGACCCCAAGGCCCTCTTATGATGATATTTCCAAA  
ATGGTGCCAACCTCCGACAAAGGTGCGTTCTACGCCCTTGGACGAGTCTTCTCGGGGCTGGTCTCCACTGGCCTG  
AAGGTCAGGATCATGGGGCCCACTATACCCCTGGGAAGAAGGAGGACCTCTACCTGAAGCCAATCCAGAGAACA  
ATCTTGATGATGGGCGCTACGTGGAGCCCATCGAGGATGTGCCTTGTGGGAACATTGTGGGCCTCGTGGGCGTG  
GACCAGTTCCTGGTGAAGACGGGCACCATCACCACCTTCGAGCAGCGCACAACATGCGGGTGATGAAGTTCAGC  
GTCAGCCCTGTTGTGAGAGTGGCCGTGGAGGCCAAGAACCCGGCTGACCTGCCCAAGCTGGTGGAGGGGTGAAG  
CGGCTGGCCAAGTCCGACCCCATGGTGCAGTGCATCATCGAGGAGTGGGAGAGCATATCATCGCGGGCGCCGGC  
GAGTGCACCTGGAGATCTGCCTGAAGGACCTGGAGGAGGACACGCCTGCATCCCCATCAAGAAATCTGACCCG  
GTCGCTCTGTACCGCGAGACGGTCAGTGAAGAGTCAACGTGCTCTGCCTCTCCAAGTCCCCCAACAAGCACAAC  
CGGCTGTACATGAAGGCGCGGCCCTTCCCCGACGGCTGGCCGAGGACATCGATAAAGGCGAGGTGTCCGCCCGT  
CAGGAGCTCAAGCAGCGGGCGCGCTACCTGGCCGAGAAGTACGAGTGGGACGTGGCTGAGGCCCGCAAGATCTGG  
TGCTTTGGGCCCGACGGCACCGGCCCAACATCCTACCGACATCACCAGGGGTGTGCAGTACCTCAACGAGATC  
AAGGACAGTGTGGTGGCCGGCTTCCAGTGGGCCACCAAGGAGGGCGCACTGTGTGAGGAGAACATGCGGGGTGTG  
CGCTTCGACGTCCACGACGTACCCCTGCACGCCGACGCCATCCACCGCGAGGGGGCCAGATCATCCCCACAGCA  
CGGCGCTGCCTCTATGCCAGTGTGCTGACCGCCAGCCACGCCTCATGGAGCCCATCTACCTGTGGAGATCCAG  
TGTCCAGAGCAGGTGGTGGTGGCATCTACGGGGTTTTGAACAGGAAGCGGGGCCACGTGTTCGAGGAGTCCCAG  
GTGGCCGGCACCCCATGTTTGTGGTCAAGGCCTATCTGCCCGTCAACGAGTCTTTGGCTTACCGCTGACCTG  
AGGTCCAACACGGGCGGCCAGGCGTTCCCCAGTGTGTGTTGACCACTGGCAGATCCTGCCCCGAGACCCCTTC  
GACAACAGCAGCGCCCCAGCCAGGTGGTGGCGGAGACCCGCAAGCGCAAGGGCCTGAAAGAAGGCATCCCTGCC  
CTGGACAACTTCTGGACAAATTGTAGCGGCCCTTCTGCAGCGCTGCCGCCCCGGGACTCGCAGCACCCAC  
AGCACCACGTCTCGAATTCTCAGACGACACCTGGAGACTGTCCCGACACAGCGACGCTCCCTGAGAGGTTTCT  
GGGGCCCGCTGCGTGCCATCACTCAACCATAACACTTGATGCCGTTTCTTTCAATATTTATTCCAGAGTCCGGA  
GGCAGCAGACACGCCCTCTTAGTAGGGACTTAATGGCCCGTGGGGAGGGGGAGGCGGGATGGGACACCCAACA  
CTTTTCCATTTCTTCAGAGGGAACTCAGATGTCCAACTAATTTTAAACAACGCATTAAGAGGTTTATTGGG  
TACATGGCCCGCAGTGGCTTTTGCCCCAGAAAGGGGAAAGGAACACGCGGCTAGATGATTTCTAGCAGGCAGGAA  
GTCCTGTGCGGTGTACCATGAGCACTCAGCTGTACTAGTGCCATTGGAATAATAAATTTGATAAGGTGTGAAA



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**FIGURE 5179**

MVNFTVDQIRAIMDKKANIRNMSVIAHVHDHGKSTLTDSLVCAGIIASARAGETRFTDTRKDEQERCITIKSTAI  
SLFYELSENDLNFQKQSKDGAGFLINLIDSPGHVDFSSSEVTAALRVTDGALVVVDCVSGVCVQTETVLRQAIAER  
IKPVLMMNKMDRALLELQLEPEELYQTFQRIVENNVNVIISTYGEGESGPMGNIMIDPVLGTVFGSGLHGWFTL  
KQFAEMYVAKFAAKGEGQLGPAERAKKVEDMMKKLWGDYFDPANGKFSKSATSPEGKKLPRTFCQLILDPIFKV  
FDAIMNFKKEETAKLIEKLDIKLDSKDKKEGKPLLKAVMRRWLPAGDALLQMITIHLPSPVTAQKYRCELLYEG  
PPDDEAAMGIKSCDPKGPLMMYISKMVPTSDKGRFYAFGRVFSGLVSTGLKVRIMGPNYTPGKKEDLYLKPIQRT  
ILMMGRYVEPIEDVPCGNIVGLVGVDQFLVKTGTITTFEHAHNMRVMKFSVSPVVRVAVEAKNPADLPKLVEGLK  
RLAKSDPMVQCIIIEESGEHIIAGAGELHLEICLKDLEEDHACIPIKKSDPVVSYRETVSEESNVLCLSKSPNKH  
RLYMKARPPFDGLAEDIDKGEVSARQELKQARARYLAEKYEWDAEARKIWCFGPDGTGPNILTDITKGVQYLNEI  
KDSVVAGFQWATKEGALCEENMRGVRFDVHDVTLHADAIHRGGGQIIPARRCLYASVLTAQPRLMPIYLVVEIQ  
CPEQVVGGIYGVNLRKRGHVFEESSQVAGTPMFVVKAYLPVNESFGFTADLRSTGGQAFPCQVFDHWQILPGDPF  
DNSSRPSQVVAETRKRKGLKEGIPALDNFLDKL

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**FIGURE 5180**

CCCCCTGCCTCTCGGACTCGGGCTGCGGCGTCAGCCTTCTTCGGGCCTCGGCAGCGGTAGCGGCTCGCTCGCCTCA  
GCCCCAGCGCCCCTCGGCTACCTCGGCCAGGCCCGCAGCGCCGCCCGCCCTCGGCCGCCCGACGCCGGCCTG  
GGCCGCGGCCCGCAGCCCCGGGCTCGCGTAGGCGCCGACCCTCCCGGCCCGCCCCCTATGGGCCCGGCTAGAGG  
CGCCGCGGCCCGCGGCCCGGAGCCCCGATGCTGGCCCGGAGGAAGCCGGTGCTGCCGGCGCTCACCATCAACC  
CTACCATCGCCGAGGGGCCATCCCCTACCAGCGAGGGCGCCTCCGAGGCAAACCTGGTGGACCTGCAGAAGAAGC  
TGGAGGAGCTGGAACCTTGACGAGCAGCAGAAGAAGCGGCTGGAAGCCTTTCTCACCAGAAAGCCAAGGTCGGCG  
AACTCAAAGACGATGACTTCGAAAGGATCTCAGAGCTGGGCGCGGGCAACGGCGGGGTGGTCACCAAAGTCCAGC  
ACAGACCCCTCGGGCCTCATCATGGCCAGGAAGCTGATCCACCTTGAGATCAAGCCGGCCATCCGGAACCAGATCA  
TCCGCGAGCTGCAGGTCTGCACGAATGCAACTCGCCGTACATCGTGGGCTTCTACGGGGCCTTCTACAGTGACG  
GGGAGATCAGCATTTGTCATGGAACACATGGACGGCGGCTCCCTGGACCAGGTGCTGAAAGAGGCCAAGAGGATTC  
CCGAGGAGATCCTGGGGAAAGTCAGCATCGCGGTTCTCCGGGGCTTGGCGTACCTCCGAGAGAAGCACCAGATCA  
TGCACCGAGATGTGAAGCCCTCCAACATCCTCGTGAACCTTAGAGGGGAGATCAAGCTGTGTGACTTCGGGGTGA  
GCGGCCAGCTCATCGACTCCATGGCCAACTCCTTCGTGGGCACGCGCTCCTACATGGCTCCGGAGCGGTTGCAGG  
GCACACATTACTCGGTGCAGTCGGACATCTGGAGCATGGGCCTGTCCCTGGTGGAGCTGGCCGTCCGGAAGGTACC  
CCATCCCCCGCCCGACGCCAAAGAGCTGGAGGCCATCTTTGGCCGGCCCGTGGTCGACGGGGAAGAAGGAGAGC  
CTCACAGCATCTCGCCTCGGCCGAGGCCCGCGGCCCGCTCAGCGGTACGGGATGGATAGCCGGCCTGCCA  
TGGCCATCTTTGAACTCCTGGACTATATTGTGAACGAGCCACCTCCTAAGCTGCCCAACGGTGTGTTCACCCCCG  
ACTTCCAGGAGTTTGTCAATAAATGCCTCATCAAGAACCCAGCGGAGCGGGCGGACCTGAAGATGCTCACAAACC  
ACACCTTCATCAAGCGGTCCGAGGTGGAAGAAGTGGATTTTGCCGGCTGGTTGTGTAAAACCTGCGGTGAACCAG  
CCCGGCACACCCACGCGCACCGCCGTGTGACAGTGGCCGGGCTCCCTCGGTCCCCTGGTGACCTGCCCACCGTC  
CCTGTCCATGCCCGCCCTTCCAGCTGAGGACCGTGGCGCCTCCACCCACCTCCTGCCTCACCTGCGGAGAGC  
ACCGTGGCGGGGCGACAGCGCATGCAGGAACGGGGTCTCCTCTCCTGCCGTCTGGCCGGGTGCCTCTGGGGA  
CGGGCGACGCTGCTGTGTGGTCTCAGAGGCTCTGCTTCCTTAGGTTACAAAACAAAACAGGGAGAGAAAAAGC

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**FIGURE 5181**

GCTTCCGGCGGAAGCGGCCTCAACAAGGGAACTTTATTGTTCCCGTGGGGCAGTCGAGGATGTCGGTGAATTAC  
GCGGCGGGGCTGTGCGCGTACGCGGACAAGGGCAAGTGGCGCCTCCCGGAGATCTTCGACCCCCCGGAGGAGCTG  
GAGCGGAAGGTGTGGGAAGTGGCGAGGCTGGTCTGGCAGTCTTCCAGTGTGGTGTTCACACGGGTGCCGGCATC  
AGCACTGCCTCTGGCATCCCCGACTTCAGGGGTCCCCACGGAGTCTGGACCATGGAGGAGCGAGGTCTGGCCCC  
AAGTTCGACACCACCTTTGAGAGCGCGCGGCCACGCAGACCCACATGGCGCTGGTGCAGCTGGAGCGCGTGGGC  
CTCCTCCGCTTCTGGTCAGCCAGAACGTGGACGGGCTCCATGTGCGCTCAGGCTTCCCCAGGGACAAACTGGCA  
GAGCTCCACGGGAACATGTTTGTGGAAGAATGTGCCAAGTGTAAGACGCAGTACGTCCGAGACACAGTCGTGGGC  
ACCATGGGCCTGAAGGCCACGGGCCGGCTCTGCACCGTGGCTAAGGCAAGGGGGCTGCGAGCCTGCAGGGGAGAG  
CTGAGGGACACCATCCTAGACTGGGAGGACTCCCTGCCCCGACCGGGACCTGGCACTCGCCGATGAGGCCAGCAGG  
AACGCCGACCTGTCCATCAGCTGGGTACATCGCTGCAGATCCGGCCCAGCGGGAACCTGCCGCTGGCTACCAAG  
CGCCGGGGAGGGCGCCTGGTCATCGTCAACCTGCAGCCCACCAAGCACGACCGCCATGCTGACCTCCGCATCCAT  
GGCTACGTTGACGAGGTGATGACCCGGCTCATGGAGCACCTGGGGCTGGAGATCCCCGCTGGGACGGCCCCCGT  
GTGCTGGAGAGGGCGCTGCCACCCCTGCCCCGCCCCACCCCAAGCTGGAGCCCAAGGAGGAATCTCCACC  
CGGATCAACGGCTCTATCCCCGCGGCCCAAGCAGGAGCCCTGCGCCCAGCACAACGGCTCAGAGCCCCGCCAGC  
CCCAAACGGGAGCGGCCACACAGCCCTGCCCCCACAGACCCCCAAAAGGGTGAAGGCCAAGGCGGTCCCCAGC  
TGACCAGGGTGCTTGGGGAGGGTGGGGCTTTTTGTAGAACTGTGGATTCTTTTTCTCTCGTGGTCTCACTTTGT  
TACTTGTCTTCTGTCCCCGGGAGCCTCAGGGCTCTGAGAGCTGTGCTCCAGGCCAGGGGTTACACCTGCCCTCCGT  
GGTCCCTCCCTGGGCTCCAGGGGCTCTGGTGCGGTTCGGGAAGAAGCCACACCCAGAGGTGACAGCTGAGCC  
CCTGCCACACCCAGCCTCTGACTTGCTGTGTTGTCCAGAGGTGAGGCTGGGCCCTCCCTGGTCTCCAGCTTAAA  
CAGGAGTGAACCTCCTCTGTCCCCAGGGCCTCCCTTCTGGGGCCCCCTACAGCCCACCCTACCCCTCCTCCATGGG  
CCCTGCAGGAGGGGAGACCCACCTTGAAGTGGGGGATCAGTAGAGGCTTGCACTGCCTTTGGGGCTGGAGGGAGA  
CGTGGGTCCACCAGGCTTCTGGAAGTCCCTCAATGCAATAAAAACAATTTCTTTCTTGCAAA

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**FIGURE 5182**

MSVNYAAGLSPYADKKGKGLPEIFDPPEELERKVVWELARLVWQSSSVVFHTGAGISTASGIPDFRGPHGVWTMEE  
RGLAPKFDITTFESARPTQTHMALVQLERVGLLRFLVSQNV DGLHVRSGFPRDKLAELHGNMFVEECAKCKTQYVR  
DTVVGTMGLKATGRLCTVAKARGLRACRGELRDTILDWEDSLPDRDLALADEASRNADLSITLGTSLQIRPSGNL  
PLATKRRGGRLVIVNLQPTKHDRHADLRIHGYVDEVMTLMEHLGLEIPAWDGPRVLERALPELPRPPTPKLEPK  
EESPTRINGSIPAGPKQEP CAQHNGSEPASPKRERPTSPAPHRPPKRVKAKAVPS

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**FIGURE 5183**

TCCATAACCTGCTGTGGCTCCCCATTGCCAGGCAGTGTAGAGTTCCTGAATACCTTGTGCTGGAAGCTGAAGCCCT  
TCCTGCCCCAGCCCTGAATCACCTCTCCAACCTCAGCCCCCTCTGCTCCTGCTGCAGCCCCCAAAACACTTGCA  
TTTCTCCTAAACTCATGGGCTCTTCCCAGCACCCAGGCCTTTGTTTACCCCTTCTGTCTGATCTTCCCTCTCACC  
CTTCAAGAACTGCTTAGCCTCCTCCAGGAAGCCCTTCACGTGCCCCAGGGCCCCACCTCCACGGGGCTTCCC  
CAGGCCCAGGTACCTCCTCTGATCCAGGCTTGACTCTTGGGGCCAGAGGATCTGTGTCCACCTGTCTCCCCAAG  
ATCAAGGGCTTCTGGAGGGCAGGGCTTGGGCCCATGTGAGCATCGTCAGGCTCATTGCAGCAGCAGTGTGGTTG  
AATAGAATAAGTCATTTTTGCCTTCGTGTGAATTCATCTCTCTCTCTGCTCTCCCTCTCTCTGTCTCTCTCC  
AATTCTGTCTCTGACTTGCTTTGTCTTTAACTCTTTATCTCTCTGTCTGTGTCTTGTCTATCCCCCTCTCCCTG  
TTCTTGCAACTCACCTCTATTTCTGTTTCTGATTCCCTCTCTCTGTCTCCCTGTCTCTCTGTCTCCTGATTT  
TCTCTCTCTCCAACCTTCTCTCTATACCTCTCTGATTCTCCCTCTGTCTCTTTTTCTGTTCCCCCTCTCCCCGTCC  
ATCTCTCCCGGCTGCCACCTTCAGGGGTCCCCACGGAGTCTGGACCATGGAGGAGCGAGGTCTGGCCCCCAAGT  
TCGACACCACCTTTGAGAGCGCGGGCCACGCAGACCCACATGGCGCTGGTGCAGCTGGAGCGCGTGGGCCTCC  
TCCGCTTCCCTGGTCAGCCAGAACGTGGACGGGTCCATGTGCGCTCAGGCCTCCCTTCTGGGCCCCCTACAGCCC  
ACCCTACCCCTCCTCCATGGGCCCTGCAGGAGGGGAGACCCACCTTGAAGTGGGGGATCAGTAGAGGCTTGCACT  
GCCCTTGGGGCTGGAGGGAGACGTGGGTCCACCAGGCTTCTGGAAAAGTCCTCAATGCAATAAAAACAATTTCTT  
TCTTGC

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**FIGURE 5184**

CAAAAGGACAGATGCAGAGGACAGGCGCCAGGCACAGATACCATCTCCCTTCCCCAAGCCAGCTGCCCCCAACCC  
TCCCCCTGCCCCGAATTAGTCTCTGCGGCGGGAGCGGGGACAGAGCAGAGCCCTCTTGGGGGAGGGGAAGCCC  
GATCCGCACCCACCCTTCCCTTGGCCCCCTCTTCTCTGCTGTCCAATATCAATTTAGCCAGTGACCTCTCC  
ACCAATTTGCACATCCCCACTCTCCCGGTCCGTTTACCGCCAGACATCGGTTCCATTTGACCCCTACTGGCGG  
TCATTCCACCCCCCTCTGCTGGTCAATTTACCCCTTTTGGCGGTCAAGTGAGTCCCCCAATTTCCCGGGCAATT  
TCCCCCTCCCTCTCTTCTCCCTCTCCCTTCCCTTCCCAAGCAGTGTCACTCCCAGCTGCTCCCCACCTCCCGCGC  
TCCGCGCTCGCTGCGGCCAGTCTCGGGCGTCCCGGTCAGTGTCCAGCTGCCGCGGCCTCGGCCCGCGGACTCCC  
GCCCCAGCCCCCTTCCCTCCGCGGGCAGCGGCTCCCTCCCTCCCCAGAACAGCTGAAGGTCTCAGTCACCTCC  
GAGGGGAGCCAGGGGGAGGGGAGGGGCGGGGACGCGCGGAGGGGAGGTGGGGAGCCCTTGACGCTGCTGCCC  
GGGACGCGGGCCCGGGCTGGTGGGAACAGGGGCGTCTCTGCGCGCCCCCTTCCAGCGTCCCACCTCCCGGC  
GGCGCGGGGAAAGTCTCTCCGAAAGCGTGAAGGGGATTGGAGGAGGTTTTTATTCCCTTTGTGCGGGTGGCT  
GGGGCCGGATCGAGGCGGGGGCGCGGGACTGGGGCTCCCCGCTGAGCCGAGAGGAGCGCGACAAAGGATG  
CGTCCCGCCGGGGTACAGTCTCCGCGGCCAACTTTGCGCGCGCGCCCGCGCCCTGGGGAGCCCGCCGCTG  
CGCTGAGAACCCAGGCGTCCGGGCTGGGAGAGGGGCGGGGAGCGTCCGCGAGGTGGCGCTGGCCCGGATCTCCGA  
CCCCAGGAAGGGATCCCGGAGCTTCTGGAGGCGCGGGCGGGCGGTGTGCTCCAGGGAACCGCGCTGCCGCGG  
AAACTCCGCGCGCTCCGCGGATGCCCCCTCGCCCTAGCCCCAGCGCGCGGGGTTCCGGGGCCCTGCGAGGTCCCC  
CCTTCCCCCGCGGTGCTTCCCAAGCTGGGCTAAGCGGGCTTCTCTTCTCCCTCTCTGTGCGCTCTTTTCT  
CCCCCTCGTTACCTTTTTCTTCCCTCTATCCATCCAGAGCCCCGCCAAAGGGCGCACCTGATCTTTCTCATCCT  
TCCCTGCTCTTCCCTTCTCTTCCACCTCTCTCTCTCTTGGGGAAAGGGGCCCGGAGAAGGGCATGTGGGGGCC  
CCTCTGACAGTGGCCCGATTGGGGTGACAGGCGCCCAAATGGCCAAGTGGCTACGGGACTACCTGAGCTTTGGGG  
GTGCGAGGGCCCCCTCCGCGAGCGCCCAACCCGGACTACACCGAGAGCGACATCCTGAGGGCCTACCGCGCGCAGA  
AGAACCTGGACTTCGAGGACCCCTATGAGGACGCGGAGAGCGCTTGGAGCCGACCCCGGGGCCCTGGGGACT  
CCAAGAACCCCGGAGATGCCAAGTATGGTTCTCCCAAGCACCGGCTCATCAAGGTGGAGGCTGCGGATATGGCCA  
GAGCCAAGGCCCTTCTGGGCGGCCCGGGGAGGAGCTGGAAGCCGACACTGAGTATTTAGACCCCTTTGATGCTC  
AGCCTCATCTGCACCCCCGGATGATGGGTACATGGAGCCCTACGATGCCCAATGGGTCTAGTGAACCTCCCG  
GCAGAGGGGTGCAGCTCTATGACACCCCTTATGAGGAACAGGACCCAGAGACAGCAGATGGACCCCTTCTGGGC  
AGAAGCCTCGGCAGAGCCGGATGCCCCAGGAAGATGAACGGCCAGCAGATGAGTATGATCAGCCCTGGGAGTGGA  
AGAAAGACCACATCTCCAGGGCGTTTGCAGTGCAGTTTGACAGTCCAGAGTGGGAGAGGACTCCAGGCTCAGCCA  
AGGAGCTCCGGAGACCTCCGCCCAGAAGCCCCCAGCCTGCGGAGCGTGTGGACCCAGCCCTGCCCTGGAGAAAC  
AGCCGTGGTTTCATGGCCCCCTGAACAGGGCGGATGCAGAGAGCCTCCTGTCCCTCTGCAAGGAAGGCAGCTACC  
TAGTGGGCTCAGTGAGACCAACCCCCAGGACTGCTCCTTGTCTCTCAGGAGCAGCCAGGGCTTCTGTCATCTGA  
AGTTGCGCGGACCCGTGAGAACCAGGTGGTGTGGGCCAACACAGCGGGCCCTTCCCCAGCGTGCCCGAGCTCG  
TCTCCACTACAGTTCACGCCCCACTGCCGGTGCAGGTGCCGAGCATCTGGCTCTGCTGTACCCCGTGGTCACGC  
AGACCCCCTGACAGTGACCTCGGCCCCCTTTTGTGCTCCTCGGGCCAGAATCGTATCCCAAAGCCCTCCCATGG  
CCTAGAAAATAAATAAGTTATTGTT

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**FIGURE 5185**

MAKWL RDYLSFGGRRPPPQPTPDYTESDILRAYRAQKNLDFEDPYEDAESRLEPDPAGPGDSKNPGDAKYGSPK  
HRLIKVEADMARAKALLGGFGEELEADTEYLDPFDAQPHAPPPDDGYMEPYDAQWVMSELPGRGVQLYDTPYEE  
QDPETADGPPSGQKPRQSRMPQEDERPADEYDQPWEWKDHSRAFAVQFDSPEWERTPGSAKELRRPPRSPQP  
AERVDPALPLEKQPWFHGFLNRADAESLLSLCKEGSYLVRLSETNPQDCSLSLRSSQGFLHLKFARTRENQVVLG  
QHSGPFPSVPELVLHYSSRPLFPVQGAEHLALLYPVVTQTP

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**FIGURE 5186**

ACCCAGCGTGCGCGGGGCCCGCGGGCCGGGGCGGGGTGACCTGGGCTGCAGCCATCGAAGAACAGAGGGAGGCC  
TGAGGAAGATCATCAAAACACTGGCTGTGAAGAAATGAAGAAATTCAGAGCTTTATCTACTCCCTGAAACAGATGC  
TGCTGAACGTGGAGGCGAACTCGGCGAAGGTGCAGGAGGACCTCGAAGCAGAGTTCCAGTCCCTCTTCTCCCTCC  
TGGAGGAGCTGAAAGAAGGCATGCTTATGAAGATAAAACAGGACCGTGCCAGCCGCACCTACGAGCTGCAGAACC  
AGCTGGCTGCCTGCACGCGGGCCCTGGAGAGCTCCGAGGAGCTTCTGGAGACAGCCAACCAGACTCTGCAGGCCA  
TGGACAGCGAGGACTTTCTCAGGCTGCCAAGCAAATCAAAGATGGAGTGACCATGGCCCCCTGCCCTCCGGCTAT  
CATTGAAAGCGAAGGTCACTGACAACATGAGTCACCTCATGGTGGACTTCGCGCAAGAGCGGCAGATGCTACAGG  
CACTCAAGTTCTGCTGTGCCAGCGCACCCGTGATCGACCTGGCTGAGTCCCTGGTGGCAGATAACTGTGTGA  
CCCTGGTGTGGCGCATGCCGATGAGGACAGCAAGATTGACCACTACGTGCTGGAGTACCGGCGGACCAACTTCG  
AGGGCCCCGCCCGCCTCAAGGAGGACCAGCCCTGGATGGTCATCGAGGGCATCCGGCAGACAGAGTACACCCTGA  
CAGGTCTCAAGTTTGACATGAAATACATGAACTTCCGTGTGAAGGCCTGTAACAAGGCAGTTGCAGGAGAGTTCT  
CTGAGCCGGTGACTCTGGAGACACCAGCGTTCATGTTCCGCTGGATGCGTCCACATCCCACCAGAACCTGCGGG  
TGGATGATCTCTCCGTGGAGTGGGACGCTATGGGCGGGAAGGTGCAGGATATCAAGGCTCGCGAGAAAGATGGCA  
AGGGGCGGACGGCGTCTCCCATCAACTCCCCAGCCAGAGGTACTCCATCTCCCAAGAGGATGCCCTCAGGTCTGTG  
GGGACCGGACCGCTTACCGCTGAGTCCTACACAGTTCTGGGGGACACGCTGATCGACGGCGGGGAGCATTACT  
GGGAGGTGCGCTACGAGCCGGACAGCAAGGCGTTCGGCGTGGGCGTGGCCTACCGCAGCCTGGGCCGCTTCGAGC  
AACTGGGCAAGACGGCCGCTCCTGGTGCCTGCACGTCAACAATTGGCTGCAGGTGAGCTTCACGGCCAAGCACG  
CCAACAAGGTCAAGGTGCTGGACGCCCCCGTGCCCGACTGCCTGGGTGTGACTGTGACTTCCACCAAGGCCTCC  
TGTCTTCTACAATGCCCCGACCAAACAAGTGCTGCACACTTTCAAGACCAGGTTACACAGCCGCTGCTGCCTG  
CTTTCACGGTATGGTGTGGCAGCTTCCAGGTGACGACAGGCCTGCAGGTCCCCAGTGCTGTGCGCTGCCTGCAAA  
AGCGAGGCAGTGCTACCAGCAGCTCCAACACCAGCCTCACCTAGGCCCCCAGGCACCCACCCAGCTGGGGTGT  
TTGGGGGAGTCGCGCCAAGCCCAGGCTGCTGGAGCCAGGCACCCCTCCTCTGTCACTTGCTGCTTGGAGCCTTAA  
CTCCAGATGGGGGGGTACCAAGAGGGAGTGGGCACCCCTGGCGGGCCCTCTCCCCACCTCACCTCTAATAAAGG  
TCAGACACTGGCCAGGCAAAAAAAAAAAAAAAAAA



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**FIGURE 5187**

MEEQREALRKIIKTLAVKNEEIQSFIYSLKQMLLNVEANSKVVQEDLEAEFQSLSLLEELKEGMLMKIKQDRAS  
RTYELQNQLAACTRALESSEELLELETANQTLQAMDSDFQAAKQIKDGVMTAPAFRLSLKAKVSDNMSHLMVDFA  
QERQMLQALKFLPVPSAPVIDLAESLVADNCVTLVWRMPDEDSKIDHYVLEYRRTNFEGPPRLKEDQPWMVIEGI  
RQTEYTLTGLKFDKYMNFVRVKACNKAVAGEFSEPVILETPAFMFRLDASTSHQNLRVDDLSVEWDAMGGKVQDI  
KAREKDGKGRASPINSFARGTSPKRMPSGRGGRDRFTAESYTVLGDTLIDGGEHYWEVRYEPDSKAFGVGVAY  
RSLGRFEQLGKTAASWCLHVNNWLQVSFTAKHANKVKVLDAPVPDCLGVHCDHFQGLLSFYNARTKQVLHTFKTR  
FTQPLLPFTVWCGSFQVTTGLQVPSAVRCLQKRGSAATSSSNTSLT

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**FIGURE 5188**

GCGGCGGGCGGCAGCATGTCGGTGGCGGGGCTGAAGAAGCAGTTCTACAAGCGAGCCAGCTGGTCAGTGAGAAG  
GTCGGAGGGGCCGAGGGGACCAAGCTGGATGATGACTTCAAAGAGATGGAGAAGAAGGTGGATGTCACCAGCAAG  
GCGGTGACAGAAGTGCTGGCCAGGACCATCGAGTACCTGCAGCCCAACCCAGCCTCGCGGGGCTAAGCTGACCATG  
CTCAACACGGTGCTCCAAGATCCGGGGCCAGGTGAAGAACCCCGGCTACCCGCAGTCGGAGGGGCTTCTGGGCGAG  
TGCATGATCCGCCACGGGAAGGAGCTGGGCGGCGAGTCCAACCTTTGGTGACGCATTGCTGGATGCCGGCGAGTCC  
ATGAAGCGCCTGGCAGAGGTGAAGGACTCCCTGGACATCGAGGTCAAGCAGAACTTCATTGACCCCTCCAGAAC  
CTGTGCGAGAAAGACCTGAAGGAGATCCAGCACCACTGAAGAACTGGAGGGCCGCCGCTGGACTTTGACTAC  
AAGAAGAAGCGGCAGGGCAAGATCCCCGATGAGGAGCTACGCCAGGCGCTGGAGAAGTTCGAGGAGTCCAAGGAG  
GTGGCAGAAACCAGCATGCACAACCTCCTGGAGACTGACATCGAGCAGGTGAGTCAGCTCTCGGCCCTGGTGGAT  
GCACAGCTGGACTACCACCGGCAGGCCGTGAGATCCTGGACGAGCTGGCGGAGAAGCTCAAGCGCAGGATGCCG  
GAAGCTTCCTCAGCCCTAAGCGGGAGTATAAGCCCCAAGCCCCGGGAGCCCTTTGACCTTGGAGAGCCTGAGCAG  
TCCAACGGGGGCTTCCCTGCACCACAGCCCCAAGATCGCAGCTTCATCGTCTTTCCGATCTTCCGACAAGCCC  
ATCCGAGCCCCCTAGCCGGAGCATGCCGCCCTGGACCAGCCGAGCTGCAAGGCGCTGTACGACTTCGAGCCCGAG  
AACGACGGGGAGCTGGGCTTCCATGAGGGCGCAGTCACTACGCTGACCAACCAGATCGATGAGAACTGGTACGAG  
GGCATGCTGGACGGCCAGTCGGGCTTCTTCCCGCTCAGCTACGTGGAGGTGCTTGTGCCCTGCCGAGTGACTC  
ACCCG†GTCCCCGCCCGCCCTCCGTCCACACTGGCCGGCACCCCTGCTGGGTCTCCTGCATTCCACGGAGCC  
CCTGTGTCAGGGCGGTGTCTGAGCCTGCCGGCGCCACCTGGGCCCGGCCCTTGAGGTACTCCCTGAGCAGGAC  
CCCACACTTGGGTGGGGGGGCTTATCTGGGTGGGTGGGGATGCCTGTTTACACTAGCGCTGACTCCCAACGGTGA  
CGGCTCCCTTCCCCACTCCATGGCGCCAGCCTCCTCCCCGCTCCCCAACTTCTCGCCAGCTGGCCGAGGCGGG  
GCAACACTAAGGTGCTCTTAGAAACACTAATGTTCTCTGGGGCAGCCCCACCTCCGTCTGACCCGACGGGGG  
CCCGGCCCACTGCCTACCTCGAGTCCCGCAGCCTTAACAGGATGGGATCGAGGGTCCCCATGGGGTGGCTCAGA  
GATAGGACCTGGTTTTTAATCCCTCCCAGCCTGGTGCTGGTGATGGGCCCTGGCCCTACTCCAGGGCCAATGCA  
CCCCCGCTCACACACGCACTCCTTCTCTCAAGGCCAGGGCAGAGGGCCTCACCGCTCCCGGGCCTGCTGTCA  
GCTTGACGCCCGGGACAGAGGCCAGCTGGGATCTGCCTGAGGACAGAGAACATGGTCTCCTGCAGGGCCCTGCC  
TCCAAGCCCCGCCCTCAGAAAGCCAAGTACCTTTTCAGCTTTTAACTGCCCCATCCCAACCCAGGGAGGCCT  
GTGTCACTCTGGCACAAGCTGCCACCACAGCCACCCACCCACCCAGCACACCTCACACGGGACCACAGCCG  
CGCTGCCGAGGGCCAAGCACAAAGGTTCCAGTGAGCGCATGTCCAGCCCTGGTGGCCAGGCTCCCTTGCTGAG  
CCGCTGCCACTTACCCCTGTGGGAAGTGGCCCCAGCCATCTCCTCTAGACCAAGGCAGGCAGCCCCGACATCTGC  
TTCCTCTATCGCCCAATGCAAAATCGATGAAATGGGGAGTTCTCTGGGCCAGGCCACATTACATTCCCCTCCCT  
CTGTGGTCCAGTGAAGCTCCGGACCCAGGCTCTGCTCTGCCCTGCCCTGCACCCCTCTGTCAGAAGTACATGA  
GGGGCGCAGAGATGAGCACACAGCTTTGGGCACGGTCCAGGGCAAAGTGAATGTACGCCTGAATTTGTAAACA  
GAAGTATTAAATGTCTCTTTCTAC

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**FIGURE 5189**

MSVAGLKKQFYKASQLVSEKVGGAGETKLDLDDFKEMEKKVDVTSKAVTEVLARTIEYLQPNPASRAKLTMLNTVS  
KIRGQVKNPGYPQSEGLLGECMIRHGKELGGESNFGDALLDAGESMKRLAEVKDSL DIEVKQNFIDPLQNLCEKD  
LKEIQHHIKKLEGRRLDFDYKKRQKGKIPDEELRQALEKFEEESKEVAETSMHNLLETDIEQVSQLSALVDAQLDY  
HRQAVQIILDELAEKLRMRMREASSRPKREYKPKPREPFDLGEPEQSNGGFPCTTAPKIAASSSFRSSDKPIRTPS  
RSMPPLDQP SCKALYDFEPENDGELGFHEGDVITLTNQIDENWYEGMLDGQSGFFPLSYVEVLVPLPQ

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**FIGURE 5190**

TTTTCTTCCGGGGGCTGGTCTCCGGCGGCCCCGTCCCCGACTGGGCCCCGTGCCCCCCGCCCCGCGGCCCCC  
GCCGCCGGGCCAGCCGCCACCAATGAAGAAATTCTTTCAGGAGTTCAAGGCCGACATCAAGTTCAAGAGCGCGGGA  
CCCGGTTCAGAAAGCTCAAAGAGTCCGTGGGGGAAAAGGCCACAAAGAGAAGCCCAACCAGCCAGCCCCAGGCCG  
CCCCGCCAGGGACCCACCAATGAGGCACAGATGGCAGCCGCTGCTGCCCTAGCCCGGCTGGAGCAGAAGCAGTCC  
CGGGCCTGGGGCCCCACATCGCAGGACACCATCCGAAACCAGGTGAGAAAGGAACCTCAAGCCGAAGCCACCGTC  
AGCGGGAGCCCCGAGGCCCCAGGGACCAACGTGGTATCTGAGCCAGAGAGGAAGGCTCTGCCACCTGGCTGTG  
CCTGGCGTGTACTTCACCTGTCCGCTCACTGGGGCCACCCTGAGGAAGGACCAGCGGGACGCCTGCATCAAGGAG  
GCCATTCTCTTGCACTTCTCCACCGACCCAGTGGCCGCTCCATCATGAAGATCTACACGTTCAACAAAGACCAG  
GACCGGGTGAAGCTGGGTGTGGACACCATTGCCAAGTACCTGGACAACATCCACCTGCACCCCGAGGAGGAGAAG  
TACCGGAAGATCAAGCTGCAGAACAAAGGTGTTTCAGGAGCGCATTAACTGCCTGGAAGGGACCCACGAGTTTTTT  
GAGGCCATTGGGTTCCAGAAGGTGTTGCTTCCCGCCAGGATCAGGAGGACCCGAGGAGTTCTACGTCTGAGC  
GAGACCACCTTGGCCCAGCCCCAGAGCCTGGAGAGGCACAAGGAACAGCTGCTGGCTGCGGAGCCCGTGC GCGCC  
AAGCTGGACAGGCAGCGCCGCTCTTCCAGCCCTCGCCCTGGCTCGCAGTTCGAACTGCCTGGGGACTTCTTC  
AACCTCACAGCAGAGGAGATCAAGCGGGAGCAGAGGCTCAGGTCCGAGGCGGTGGAGCGGCTGAGCGTGTGCGG  
ACCAAGGCCATGCGGGAGAAGGAGGAGCAGCGGGGGCTGCGCAAGTACAACCTACACGCTGCTGCGCGTGC GCGCTC  
CCCGATGGCTGCCTCTCTGCAGGGCACTTTCTACGCTCGGGAGCGGCTGGGGGCGGTGTACGGGTTCTGTCGGGAG  
GCCCTGCAGAGCGACTGGCTGCCTTTTGAGCTGCTGGCCTCGGGAGGGCAGAAGCTGTCCGAGGACGAGAACCTG  
GCCTTGAACGAGTGC GGGCTGGTGCCCTCTGCCCTCCTGACCTTCTCGTGGGACATGGCTGTGCTGGAGGACATC  
AAGGCCGCGGGGGCCGAGCCGGACTCCATCCTGAAACCCGAGCTCCTGTGAGCCATCGAGAAGCTCTTGTGAAT  
AAAAGCAGGGTTGGCCTCAGCCCTGTGGGTCTGTCTCATGCTCTCCCTGTTCTCTCCCGCCACCCAGGGCCT  
CCAAGCCACCTCTGGAATACTTGGCTCTGCCCCATGGGCACGGGAGGGGCGCCAGCCGTGGAGCTGTGGAATTG  
GGCCCCGTGGCAGAGCCCCATCCCTTGGGGGCTGTGGGGATGCGCCCAAGCCCCGAGGGAGAGGCTGGGGAC  
ACCAAC

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**FIGURE 5191**

MKKFFQEFKADIKFKSAGPGQKLKESVGEKAHKEKPNQAPRPPRQGPTNEAQMAAAALARLEQKQSRWGPST  
QDTIRNQVRKELQAEATVSGSPEAPGTNNVSEPREEGSAHLAVPGVYFTCPLTGATLRKDQORDACIKEAILLHFS  
TDPVAASIMKIYTFNKDQDRVKLGVDTIAKYLDNIHLHPREEKYRKIKLQNKVFQERINCLEGTHEFFEAGFQK  
VLLPAQDQEDPEEFYVLSETTLAQPSLERHKEQLLAAEPVRAKLDRQRRVFQPSPLASQFELPGDFFNLTAEEI  
KREQLRSEAVERLSVLRKAMREKEEQRGLRKYNYTLRVRLPDGCLLQGTIFYARERLGAVYGFVREALQSDWL  
PFELLASGGQKLSDENLALNECGLVPSALLTFSWDMVLEDIKAAGAEPSILKPELLSAIEKLL

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**FIGURE 5192**

GTCTACCCGCCCCTGCCCTGAGGACCCTAGTCCAACATCGCGGCGCCAGCGGAGGGTGGAAACGGCGTCGGCGCG  
AGCTTGTGGGCCGCGCTGCTCCTAGGGGCCGTGGCGCTGAGGCCGGCGGAGGCGGTGTCCGAGCCCACGACGGTG  
GCGTTTGACGTGCGGCCCGGCGGCGTCGTGCATTCTTCTCCATAACGTGGGCCCGGGGGACAAATATACGTGT  
ATGTTCACTTACGCCTCTCAAGGAGGGACCAATGAGCAATGGCAGATGAGTCTGGGGACCAGCGAAGACCACCAG  
CACTTCACCTGCACCATCTGGAGGCCCCAGGGGAAGTCTATCTGTACTTCACACAGTTCAAGGCAGAGGTGCGG  
GGCGCTGAGATTGAGTACGCCATGGCCTACTCTAAAGCCGCATTTGAAAGGGAAAGTGATGTCCCTCTGAAAAC  
GAGGAATTTGAAGTGACCAAAACAGCAGTGGCTCACAGGCCCGGGGCATTCAAAGCTGAGCTGTCCAAGCTGGTG  
ATTGTGGCCAAGGCATCGCGCACTGAGCTGTGACCAGCAGCCCTGTTGCGGGTGGCACCTTCTCATCTCCGGTGA  
AGCTGAAGGGGCCCTCCTGGCTCCCAACAGCTTCTCAGTTCCCACTTCCTGCTGAGCTCTTCTGGACTCAGGATC  
GCAGATCCGGGGCACAAAGAGGGTGGGGAACATGGGGGCTATGCTGGGGAAAGCAGCCATGCTCCCCCGACCTC  
CAGCCGAGCATCCTTCATGAGCCTGCAGAACTGCTTTCCTATGTTTACCCAGGGGACCTCCTTTCAGATGAACTG  
GGAAGAGATGAAATGTTTTTTCATATTTAAATAAATAAGAACATTAAAAAGC

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**FIGURE 5193**

MAAPSGGWNGVGASLWAALLLGAVALRPAEAVSEPTTVAFDVRPGGVVHSESHNVGPGDKYTCMFTYASQGGTNE  
QWQMSLGTSEDHQHFTCTIWRPQGKSYLYFTQFKAEVRAEIEYAMAYSKAAFERESDVPLKTEEFVTKTAVAH  
RPGAFKAELSKLVIVAKASRTEL

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**FIGURE 5194A**

AAGGTGCCTGAGCCGGCGGGTCCCTGTGTCCGCCGCGGTGTCTCCCCGCTCCCGCCACTTCCGGGGTTCGCA  
GTCCCGGGCATGGAGCCGCGACCGTGAGGCGCGCTGGACCCGGGACGACCTGCCAGTCCGGCCGCCGCCAC  
GTCCCGGTCTGTGTCCACGCCTGCAGCTGGAATGGAGGCTCTCTGGACCTTTAGAAGGCACCCCTGCCCTCCT  
GAGGTGAGTGCAGCGTTAATGCGGAAGGTTAAGAACTGCGCCTGGACAAGGAGAACACCGGAAGTTGGAGAAG  
CTTCTCGTGAATTCGAGGGGGCTGAGAGGATGGCCACCACCGGGACCCCAACGGCCGACCGAGCGACGACG  
CGCCACAGATGACCCGGCCGCCGCTTCCAGGTGCGAAGCACTCGTGGGACGGGCTCCGGAGCATCATCCACGG  
CAGCCGCAAGTACTCGGGCCTCATTGTCAACAAGGCGCCCCAGCACTTCCAGTTTGTGCGAAGACGGATGAGTC  
TGGGCCCCACTCCACCGCTCTACTACCTGGGAATGCCATATGGCAGCCGAGAGAATCCCTCCTCTACTCTGA  
GATTCCCAAGAAGGTCCGGAAGAGGCTCTGTGCTCCTGTCTGGAAGCAGATGCTGGATCATTTCAGGCCAC  
GCCCCACCATGGGGTCTACTCTCGGGAGGAGGAGCTGCTGAGGGAGCGGAAACGCTGGGGGTCTTCGGCATCAC  
CTCCTACGACTTCCACAGCGAGAGTGGCCTCTTCTCTTCCAGGCCAGCAACAGCCTCTTCCACTGCCGCGACGG  
CGGCAAGAACGGCTTCATGGTGTCCCTATGAAACCGCTGGAATCAAGACCCAGTGCTCAGGGCCCCGGATGGA  
CCCCAAAATCTGCCCTGCCGACCTGCCTTCTCTCTTTCATCAATAACAGCGACCTGTGGGTGGCCAACATCGA  
GACAGGCGAGGAGCGGCGGCTGACCTTCTGCCACCAAGGTTTATCCAATGTCTGGATGACCCCAAGTCTGCGGG  
TGTGGCCACCTTCGTCTATACAGGAAGAGTTCGACCGCTTCACTGGGTACTGGTGGTGCCCCACAGCCTCCTGGGA  
AGGTTTCAGAGGGCCTCAAGACGCTGCGAATCTGTATGAGGAAGTCGATGAGTCCGAGGTGGAGGTCAATCACGT  
CCCCTCTCTGCGCTAGAAGAAAGGAAGACGGACTCGTATCGGTACCCAGGACAGGCAGCAAGAATCCCAAGAT  
TGCCCTTGAACTGGCTGAGTTCAGACTGACAGCCAGGGCAAGATCGTCTCGACCCAGGAGAAGGAGCTGGTGCA  
GCCCTTCAGTCTGCTGTTCCCGAAGGTGGAGTACATCGCCAGGGCCGGGTGGACCCGGGATGGCAATACGCTG  
GGCCATGTTCTGGACCGGCCCCAGCAGTGGCTCCAGCTCGTCTCTCCCCCGGCCCTGTTATCCCGAGCAC  
AGAGAATGAGGAGCAGCGGCTAGCCTCTGCCAGAGCTGTCCCCAGGAATGTCCAGCCGTATGTGGTGTACGAGGA  
GGTCACCAACGTCTGGATCAATGTTCATGACATCTTCTATCCCTTCCCCAATCAGAGGGAGAGGACGAGCTCTG  
CTTTCTCCGCGCAATGAATGCAAGACCGGCTTCTGCCATTTGTACAAAGTCACCGCCGTTTTTAAATCCCAGGG  
CTACGATTGGAGTGAGCCCTTCAGCCCCGGGGAAGATGAATTTAAGTGCCCCATTAAGGAAGAGATTGCTCTGAC  
CAGCGGTGAATGGGAGGTTTTGGCGAGGCACGGCTCCAAGATCTGGGTCAATGAGGAGACCAAGCTGGTGTACTT  
CCAGGGCACCAAGGACACGCCGCTGGAGCACCACCTCTACGTGGTCAGCTATGAGGCGGCCGGCGAGATCGTACG  
CCTACCACGCCCGCTTCTCCCATAGCTGCTCCATGAGCCAGAACTTCGACATGTTGCTCAGCCACTACAGCAG  
CGTGAGCACGCCGCCCTGCGTGACGTCTACAAGCTGAGCGGCCCCGACGACGACCCCTGCACAAGCAGCCCCG  
CTTCTGGGCTAGCATGATGGAGGCAGCCAGCTGCCCCCGGATTATGTTCTCCAGAGATCTTCCATTTCACAC  
GCGCTCGGATGTGCGGCTCTACGGCATGATCTACAAGCCCCACGCTTGCAGCCAGGGAAGAAGCACCACCGT  
CCTCTTTGTATATGGAGGCCCCAGGTGCAGCTGGTGAATAACTCTTCAAAGGCATCAAGTACTTGGGCTCAA  
CACACTGGCTCCCTGGGCTACGCCGTGGTTGTGATTGACGGCAGGGGCTCCTGTACGCGAGGGCTTCGGTTTGA  
AGGGGCCCTGAAAAACCAATGGGCCAGGTGGAGATCGAGGACCAGGTGGAGGGCTGCAGTTCTGGGCCGAGAA  
GTATGGCTTCATCGACCTGAGCCGAGTTGCCATCCATGGCTGGTCTACGGGGGCTTCTCTCGCTCATGGGGCT  
AATCCACAAGCCCCAGGTGTTCAAGGTGGCCATCGCGGTGCCCCGCTACCGTCTGGATGGCCTACGACACAGG  
GTACACTGAGCGCTACATGGACGTCCCTGAGAACCAACAGCACGGCTATGAGGCGGGTTCCTGGCCCTGCACGT  
GGAGAAGCTGCCAATGAGCCCAACCGCTTGCTTATCTCCACGGCTTCTGGACGAAAACGTGCACCTTTTCCA  
CACAACTTCTCGTCTCCCACTGATCCGAGCAGGGAACCTTACCAGCTCCAGATCTACCCCAACGAGAGACA  
CAGTATTGCTGCCCCGAGTCGGGCGAGCACTATGAAGTCACGTTGCTGCACTTTCTACAGGAATACCTCTGAGC  
CTGCCACCGGGAGCGCCACATCACAGCACAAAGTGCTGCAGCTCCGCGGGGAACAGGCGGGAGGGACTGAG  
TGGCCCGCGGGCCCCAGTGAGGCACTTTGTCCCGCCAGCGCTGGCCAGCCCCGAGGAGCCGCTGCCTTCACCGC  
CCCGACGCTTTTATCTTTTTTAAACGCTCTTGGGTTTTATGTCCGCTGCTTCTTGGTTGCCGAGACAGAGAGA  
TGGTGGTCTCGGGCCAGCCCCCTCTCTCCCCGCTTCTGGGAGGAGGAGTACACGCTGATGGGCCTGGAGAG  
GCCAGAAGAGACTCAGAGGAGCGGGCTGCCTTCCGCTTGGGGCTCCTGTGACCTCTCAGTCCCCTGGCCCCGCC  
AGCCACCGTCCCCAGCACCCAAGCATGCAATTGCTGTCCCCCGGCCAGCCTCCCCAAGTTGATGTTTGTGTT  
TTGTTTGGGGGATATTTTTCATAATTATTTAAAGACAGGCCGGGCGGGTGGCTCAGCTCTGTAATCCCAGCA  
CTTTGGGAGGCTGAGGCGGGCGGATCACCTGAGGTTGGGAGTTCAAGACCAGCCTGGCCAACATGGGGAACCCC  
GTCTCTACTAAAAATACAAAAATTAGCCGGGTGGTGGCGCTGCCTATAATCCAGCTACTCGGAGGCTGA



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**FIGURE 5194B**

GGCAGGAGAATCGCTTGAACCCGGGAGGTGGAGGTTGCGGTGAGCCAAGATCGCACCATTGCACTCCAGCCTGGG  
CAACAAGAGCGAAACTCTGTCTCAAAATAAATAAAAAATAAAAGACAGAAAGCAAGGGGTGCCTAAATCTAGACT  
TGGGGTCCACACCGGGCAGCGGGGTTGCAACCCAGCACCTGGTAGGCTCCATTCTTCCCAAGCCCGAGCAGAGG  
GTCATGCGGGCCCCACAGGAGAAGCGGCCAGGGCCCGGGGGGCACCACCTGTGGACAGCCCTCCTGTCCCCAA  
GCTTTCAGGCAGGCACTGAAACGCACCGAACTTCCACGCTCTGCTGGTCAGTGGCGGCTGTCCCTCCCCAGCCC  
AGCCGCCAGCCACATGTGTCTGCCTGACCCGTACACACCAGGGGTTCCGGGGTTGGGAGCTGAACCATCCCCAC  
CTCAGGGTTATATTTCCCTCTCCCTTCCCTCCCCGCCAAGAGCTCTGCCAGGGGCGGGCAAAAAAAAAAAGTAAA  
AAGAAAAGAAAAAAAAAAAAAA

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**FIGURE 5195**

TTCCAAGCTGGTTTTGAAGTCGCGGCAGCTGTTCTGGGACGTCCGGTTGACCGCGCGTCTGCTGCAGAGACCAT  
GTCTGCCGACGGGGCAGAGGCTGATGGCAGCACCCAGGTGACAGTGGAAGAACCAGGTACAGCAGCCCAGTGTGGT  
GGACCGTGTGGCCAGCATGCCTCTGATCAGCTCCACCTGCGACATGGTGTCCGCAGCCTATGCCTCCACCAAGGA  
GAGCTACCCGCACATCAAGACTGTCTGCGACGCAGCAGAGAAGGGAGTGAGGACCCTCACGGCGGCTGCTGTGTC  
CGGGGCTCAGCCGATCCTCTCCAAGCTGGAGCCCCAGATTGCATCAGCCAGCGAATACGCCACAGGGGGCTGGA  
CAAGTTGGAGGAGAACCCTCCCCATCCTGCAGCAGCCCACGGAGAAGGTCCTGGCGGACACCAAGGAGCTTGTGTC  
GTCTAAGGTGTGCGGGGCCCAAGAGATGGTGTCTAGCGCCAAGGACACGGTGGCCACCCAATTGTGCGAGGCGGT  
GGACGCGACCCGCGGTGCTGTGCAGAGCGGCGTGACAAAGACAAAGTCCGTAGTGACCGGCGGCGTCCAATCGGT  
CATGGGCTCCCGCTTGGGCCAGATGGTGTGAGTGGGGTCGACACGGTGTGGGGAAGTCGGAGGAGTGGGCGGA  
CAACCACCTGCCCTTACGGATGCCGAACCTGGCCCGCATCGCCACATCCCTGGATGGCTTTGACGTGCGGTCCGT  
GCAGCAGCAGCGGCAGGAACAGAGCTACTTCGTACGTCTGGGCTCCCTGTGCGAGAGGCTGCGGCAGCACGCCA  
TGAGCACTCGCTGGGCAAGCTTTCGAGCCACCAAGCAGAGGGCACAGGAGGCTCTGCTGCAGCTGTGCGAGGTCT  
AAGCCTGATGGAACTGTCAAGCAAGGCGTTGATCAGAAGCTGGTGGAAAGGCCAGGAGAAGCTGCACCAGATGTG  
GCTCAGCTGGAACCAGAAGCAGCTCCAGGGCCCCGAGAAGGAGCCGCCCAAGCCAGAGCAGGTGAGTCCCGGGC  
GCTCACCATGTTCCGGGACATTGCCAGCAACTGCAGGCCACCTGTACCTCCCTGGGGTCCAGCATTAGGGCCT  
CCCCACCAATGTGAAGGACCAGGTGCAGCAGGCCCGCGCCAGGTGGAGGACCTCCAGGCCACGTTTTCCAGCAT  
CCACTCCTTCCAGGACCTGTCCAGCAGCATTCTGGCCCAGAGCCGTGAGCGTGTGCGCAGCGCCGCGAGGCCCT  
GGACCACATGGTGGAAATATGTGGCCCAGAACACACCTGTACGTGGCTCGTGGGACCCTTTGCCCTGGAATCAC  
TGAGAAAGCCCCGGAGGAGAAGAAGTAGGGGGAGAGGAGGAGGACTCAGCGGGCCCCGTCTCTATAATGCAGCTGT  
GCTCTGGAGTCTCAACCCGGGGCTCATTTCAAACTTATTTTCTAGCCACTCCTCCCAGCTCTTCTGTGCTGTCC  
ACTTGGGAAGCTAAGGCTCTCAAAACGGGCATCACCCAGTTGACCCATCTCTCAGCCTCTCTGAGCTTGGAAGAA  
GCCTGTTCTGAGCCTCACCCCTATCAGTCAGTAGAGAGAGATGTCCAGAAAAATATCTTTTCAGGAAAGTTCTCCC  
CTGCAGAAATTTTTTCTTGTAAATATCAGGAATATAGGCCGGGTGCGGTGGCTCACACCTGTAATCCCAGCA  
CTTTGGGAGGCTGAGGCGGGCGGAACACCTGAGGTGAGGTGTTGAGACCAGCCAGGCCAACATGGTGAACCCC  
GTCTCTACTAAAAATACAAAAAAATGAGCCGGGCATGGTAGCAGGTGTCTGTTATCCCAGTTAGGAGGCTGAG  
GCAAGAGAATCTCTTGAACTGAGAGGCGGAGGTTGCAGTGAGCCAAGATCGCGCCATTGCACTCCAGCCTGGGG  
GACAAGAGTGAGACTTAGTCTCA

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**FIGURE 5196A**

CGACTCCTTAGAGCATGGCATGGCTCAGAGGTGCTGGTAAACTGATGGGGGTTTTTGCTGTCCCTCCCCTCAGC  
GCCGACACCATGTGGATCCAGGTTTCGGACCATGGACGGGAGGCAGACCCACACGGTGACTCGCTGTCCAGGCTG  
ACCAAGGTGGAGGAGCTGAGGCGGAAGATCCAGGAGCTGTTCCACGTGGAGCCAGGCCTGCAGAGGCTGTTCTAC  
AGGGGCAAAACAGATGGAGGACGGCCATACCTCTTCGACTACGAGGTCCGCCTGAATGACACCATCCAGCTCCTG  
GTCCGCCAGAGCCTCGTGCTCCCCACAGACCAAGGAGCGGGACTCCGAGCTCTCCGACACCGACTCCGGCTGC  
TGCCTGGGCCAGAGTGAGTCAGACAAGTCTCCACCCACGGTGAGGCGGCCGCCGAGACTGACAGCAGGCCAGCC  
GATGAGGACATGTGGGATGAGACGGAATTGGGGCTGTACAAGGTCAATGAGTACGTGATGCTCGGGACACGAAC  
ATGGGGGCGTGTTTIGAGGCGCAGGTGGTCAGGGTGACGCGGAAGGCCCCCTCCCGGGACGAGCCCTGCAGCTCC  
ACGTCCAGGCCGGCGCTGGAGGAGGACGTATTTACCACGTGAAATACGACGACTACCCGGAGAACGGCGTGGTC  
CAGATGAATCCAGGGACGTCCGAGCGCGCGCCCGCACCATCATCAAGTGGCAGGACCTGGAGGTGGGCCAGGTG  
GTCATGCTCAACTACAACCCCGACAACCCCAAGGAGCGGGGCTTCTGGTACGACGCGGAGATCTCCAGGAAGCGC  
GAGACCAGGACGGCGCGGGAACCTCTACGCCAACGTGGTGCTGGGGGATGATTCTCTGAACGACTGTGGGATCATC  
TTCGTGGACGAAGTCTTCAAGATTGAGCGGCCGGGTGAAGGGAGCCCCATGGTTGACAACCCCATGAGACGGAAG  
AGCGGGCCGTCTGCAAGCACTGCAAGGACGACGTGAACAGACTCTGCCGGGTCTGCGCCTGCCACCTGTGCGGG  
GGCCGGCAGGACCCCGACAAGCAGCTCATGTGCGATGAGTGCACATGGCCTTCCACATCTACTGCTGGACCCG  
CCCCTCAGCAGTGTTCCCGAGGACGAGTGGTACTGCCCTGAGTGCCGGAATGATGCCAGCGAGGTGGTACTG  
GCGGGAGAGCGGCTGAGAGAGAGCAAGAAGAAGGCGAAGATGGCTCGGCCACATCGTCTCAGACGGGACTGG  
GGCAAGGGCATGGCCTGTGTGGGCCGACCAAGGAATGTACCATCGTCCCGTCCAACCACTACGGACCCATCCCG  
GGGATCCCGTGGGCACCATGTGGCGGTTCCGAGTCCAGGTGACGAGTCCGGTGTCCATCGGCCCCACGTGGCT  
GGCATAACGGCCGGAGCAACGACGGAGCGTACTCCCTAGTCTGGCGGGGGGCTATGAGGATGATGTGGACCAT  
GGGAATTTTTTACATACACGGGTAGTGGTGGTGCAGATCTTCCGGCAACAAGAGGACCGCGGAACAGTCTTGT  
GATCAGAACTACCAACACCAACAGGGCGCTGGCTCTCAACTGCTTTGCTCCCATCAATGACCAAGAAGGGGCC  
GAGGCCAAGGACTGGCGGTGCGGGGAAGCCGGTCAGGGTGGTGCGCAATGTCAAGGGTGGCAAGAATAGCAAGTAC  
GCCCCGCTGAGGGCAACCGCTACGATGGCATCTACAAGGTTGTGAAATACTGGCCCGAGAAGGGGAAGTCCGGG  
TTTCTCGTGTCGCTACCTTCTGCGGAGGGACGATGATGAGCCTGGCCCTTGACGAAGGAGGGGAAGGACCGG  
ATCAAGAAGCTGGGGCTGACCATGCAGTATCCAGAAGGCTACCTGGAAGCCCTGGCCAACCGAGAGCGAGAGAAG  
GAGAACAGCAAGAGGGAGGAGGAGGAGCAGCAGGAGGGGGGCTTCGCGTCCCCAGGACGGGCAAGGGCAAGTGG  
AAGCGGAAGTCGGCAGGAGGTGGCCCGAGCAGGGGCGGGTCCCCGCGCCGACATCCAAGAAAACCAAGGTGGA  
GCCCTACAGTCTACGGCCCGCAGAGCAGCCTCATCAGAGAGGACAAGAGCAACGCCAAGCTGTGGAATGAGGT  
CCTGGCGTCACTCAAGGACCGGCCGCGAGCGGCAGCCGTTCCAGTTGTTCTGAGTAAAGTGGAGGAGACGTT  
CCAGTGTATCTGCTGTGTCAGGAGCTGGTGTTCGGCCCATCACGACCGTGTGCCAGCACAACGTGTGCAAGGACTG  
CCTGGACAGATCCTTTCCGGCACAGGTGTTACGTGCCCTGCCTGCCGTACGACCTGGGCCGCGACTATGCCAT  
GCAGGTGAACCAGCCTCTGCAGACCGTCTCAACCAGCTCTTCCCCGGCTACGGCAATGGCCGGTGATCTCCAAG  
CACTTCTCGACAGGCGTTTTGCTGAAAACGTGTCGGAGGGCTCGTTCATCGGCACCTGATTTTGTCTTCTAGTGGGC  
TTAACTTAAACAGGTAGTGTTCCTCCGTTCCCTAAAAGGTTTGTCTTCTTTTTTTTTTTTATTTTATTTTTT  
AAATCTATACATTTTCAGGAATTTATGTATTCTGGCTAAAAGTTGGACTTCTCAGTATTGTGTTTGTCTTTGA  
AAACATAAAAGCCTGCAATTTCTCGACAAAACAACAAGATTTTTTAAAGATGGAATCAGAACTACGTGGTGT  
GGAGGCTGTGTATGTTTCTGGTGTCAGTTTCTCAGAAGTTGCTGCCACCAACTCTTAAAGAAGGCACAGGATCA  
GTCCTTCTCTCGGGTCTGGCCCCCAAGGTGAGAGCAAGCATCTTCTGACAGCATTTTGTATCTAAAGTCCAG  
TGACATGGTTCCCCGTGGTGGCCGTGGCAGCCGTGGCATGGCTGGCTCAGCTGTCTGTTGAAGTTGTTGCAA  
GGAAAAGAGGAAACATCTCGGCCTAGTTCAAACCTTTGCCTCAAAGCCATCCCCACCAGACTGCTTAGCGTCT  
GAGATCCGCGTGAAAAGTCTCTGCCACGAGAGCAGGGAGTTGGGGCCACGCAGAAATGGCCTCAAGGGGACTC  
TGCTCCACGTGGGGCCAGGCGTGTGACTGACGCTGTCCGACGAAGCGGGCCACGGACGGACGCCAGCACACGAAG  
TCAGTGAAGTGCCTTTGATTGCTTCTTTCTAAAGACGACAGTCTTTGTTGTAGCACTGAATTATTGAA  
AATGTCAACCAGATTCTAGAACTGCGGTATCCAGTCTTCTTCTGACACCGGATGGGTGCTTGGGAACCGTTTGA  
GCCTTATAGATCATTTACATTCAATTTTTTTAACTCAGCAAGTGAGAACTTACAAGAGGGTTTTTTTTAAATTTT  
TTTTTCTCTTAATGAACACATTTCTAAATGAATTTTTTTGTAGTTACTGTATATGTACCAAGAAAGATATAAC  
GTTAGGGTTTGGTTGTTTTTGTATTTTTTTCTTTTGAAAGGGTTGTTAATTTTTCTAATTTTACCAA

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**FIGURE 5196B**

AGTTTGCAGCCTATACCTCAATAAAACAGGGATATTTTAAATCACATACCTGCAGACAAACTGGAGCAATGTTAT  
TTTTAAAGGGTTTTTTTACCTCCTTATTCTTAGATTATTAATGTATTAGGGAAGAATGAGACAATTTTGTGTAG  
GCTTTTCTAAAGTCCAGTACTTTGTCCAGATTTTAGATTCTCAGAATAAATGTTTTTCACAGAT

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**FIGURE 5197A**

GTCGCCAGCAACCGAGCGGGGCCCGGCCGAGCGGGGCTGGGGGTGCGACGCCGAGGGCGGGGGAGAGCGCGCC  
GCTGCTCCCGGACCGGGCCGCGCACGCCGCTCAGGAACCATCACTGTTGCTGGAGGCACCTGACAAATCCTAGC  
GAATTTTTGGAGCATCTCCACCCAGGAACCTCGCCATCCAGAAGTGTGCTTCCCGCACAGCTGCAGCCATGGGGT  
CTGAGGACCACGGCGCCAGAACCCAGCTGTAAATCATGACGTTTCGCCCAACCATGGAAGAATTTAAAGACT  
TCAACAAATACGTGGCCTACATAGAGTCGACAGGAGCCACCGGGCGGGCCTGGCCAAGATCATCCCCCGAAGG  
AGTGGAAGCCGCGGCAGACGTATGATGACATCGACGACGTGGTGATCCCGGCGCCCATCCAGCAGGTGGTGACGG  
GCCAGTCGGGCTCTTACGCGAGTACAATATCCAGAAGAAGGCCATGACAGTGCGCGAGTACCGCCGCTGGCCA  
ACAGCGAGAAGTACTGTACCCCGCGGCACCAGGACTTTGATGACCTTGAACGCAAATACTGGAAGAACCTCACCT  
TTGTCTCCCCGATCTACGGGGCTGACATCAGCGGCTCTTTGTATGATGACGACGTGGCCAGTGGAACATCGGGA  
GCCTCCGGACCATCCTGGACATGGTGAGCGCGAGTGCGGCACCATCATCGAGGGCGTGAAACACGCCCTACCTGT  
ACTTCGGCATGTGGAAGACCCTTCGCTGGCACACCGAGGACATGGACCTGTACAGCATCAACTACCTGCACT  
TTGGGGAGCCTAAGTCCTGGTACGCCATCCCAACAGAGCACGGCAAGCGCCTGGAGCGGCTGGCCATCGGCTTCT  
TCCCCGGGAGCTCGCAGGGCTCGACGCTTCTGCGGCATAAGATGACCCTCATCTCGCCCATCATCTGAAGA  
AGTACGGGATCCCCCTTCAGCCGATCACGCAGGAGCGGGGAATTCATGATCACATTTCCCTACGGCTACCACG  
CCGGCTTCAATCACGGGTTCAACTGCGCAGAAATCTACCAACTTCGCCACCCTGCGGTGGATTGACTACGGCAAAG  
TGGCCACTCAGTGACGTCGCCGAAGGACATGGTCAAGATCTCCATGGACGTGTTGCTGCGCATCCTGCAGCCCG  
AGCGCTACGAGCTGTGGAAGCAGGGCAAGGACCTCACGGTGTGGACCACACGCGGCCACGGCGCTCACAGCC  
CCGAGCTGAGCTCCTGGAGTGATCCCGGGCTCGCTGAAGGCCAAGCTCCTCCGAGGTCTCACCGGAAACGGA  
GCCAGCCCAAGAAGCCGAAGCCCAAGACCCCAAGTTCCCTGGGGAGGGTACGGCTGGGGCAGCGCTCTAGAGG  
AGGCTGGGGGCGAGCTGAAGGAGGAGGCTGGGCCGAGGTTGACCCCGAGGAGGAGGAGGAGGAGCGCAGCCAC  
TGCCACACGCGCCGGGAGGCGGAGGGCGCAGAAGGAGCGGGAGGGGCAAGCTGCGGCCAACCAAGGCCAAGAGCG  
AGCGGAAGAAGAAGAGCTTCGGCTGTGCCCCACAGCTGCCGCCCCGCTGTCTCACTTCCCCTCAGAGGAGG  
CGCTGTGGCTGCCATCCCCACTGGAGCCCCGGTGTGGGCCAGGCCCTGCAGCCATGGAGGAGAGCCCCCTGC  
CGGCACCCCTTAATGTCTGTGCCCTGAGGTGCCAGTGAGGAGCTAGAGGCCAAGCCTCGGCCCATCATCCCCA  
TGCTGTACGTGGTGCCGCGGGCGGGCAAGGCAGCCTTCAACCAGGAGCACGTGTCTGCCAGCAGGCCTTTGAGC  
ACTTTGCCCAAGAAGGTCCGACCTGGAAGGAACAGTTTCCCCCATGGAGCTGACGGGGCCAGAGGACGGTGCAG  
CCAGCAGTGGGGCAGGTGCGATGGAGACCAAGCCCGGGCCGAGAGGGGCAGGCACCGTCCACATTTTCAAAT  
TGAAGATGGAGATCAAGAAGAGCCGCGCCATCCCCGCGGGCCGCCCCACCGGTCCCCACTGTCCGTGGTGA  
AGCAGGAGGCCTCAAGTGACGAGGAGGCATCCCCCTTCTCCGGGGAGGAAGATGTGAGTGACCCGGACGCTTGA  
GGCCGCTGTCTCTGTCAGTGAAGAACAGGGCGGCCAGCTTCCAGGCCGAGAGGAAGTTCAACGACGCGGCTG  
CGCGCACGGAGCCCTACTGCGCCATCTGCACGCTCTTCTACCCCTACTGCCAGGCCCTACAGACTGAGAAGGAGG  
CACCCATAGCTCCCTCGGAAAGGGCTGCCCGGCCACATTACCCTCCAAAGCCGTGAGAAGACCCGACCGCTCA  
TCCCTGAGATGTGCTTACCTCTGGCGGTGAGAACACGGAGCCGTGCCTGCCAACTCCTACATCGCGACGACG  
GGACCAGCCCCCTGATCGCTGCGGCAAGTGCTGCTGCGAGGTCCATGCCAGTTGCTATGGCATCCGTCGGAGC  
TGGTCAATGAAGGCTGGACGTGTTCCCGGTGCGCGGCCACGCCCTGGACTGCGGAGTGCTGCTGTGCAACCTGC  
GAGGAGGTGCGCTGCAGATGACCACCGATAGGAGGTGGATCCACGTGATCTGTGCCATCGCAGTCCCCGAGGCGC  
GCTTCTGAACGTGATTGAGCGCCACCCTGTGGACATCAGCGCCATCCCCGAGCAGCGGTGGAAGCTGAAATGCG  
TGTAAGTCCGGAAGCGGATGAAGAAGGTGTGAGTGCTGTATCCAGTGCTCCTACGAGCACTGCTCCACGTCTT  
TCCAGTGACCTGCGCCACGCCGAGCGTGTCTATGGAGCCGAGCAGACTGGCCCTATGTGGTCTCCATCACCT  
GCCTCAAGCACAAAGTCGGGGGTACGCTGTCCAACCTCTGAGGGCCGTGTCCCTAGGCCAGGTGGTCAACCA  
AGAACCGCAACGGGCTGTACTACCGCTGTGCGTCATCGGTGCCGCTCGCAGACCTGCTACGAAGTGAAGTTCG  
ACGATGGCTCCTACAGCGACAACCTGTACCCTGAGAGCATCAGAGTAGGGACTGTGTCCAGCTGGGACCCCTT  
CCGAGGGGGAGCTGGTGGAGCTCCGGTGGACTGACGGCAACCTCTACAAGGCCAAGTTCATCTCCTCCGTACCA  
GCCACATCTACCAGGTGGAGTTTGAGGACGGTCCCAGCTGACGGTGAAAGCGTGGGGACATCTTACCCTGGAGG  
AGGAGCTGCCCAAGAGGGTCCGCTCTCGGCTGTACTGAGCACGGGGGCACCGCAGGAGCCCGCCTTCTCGGGGG  
AGGAGGCCAAGGCCCAAGCGCCCGGTGTGGGCACCCCGCTTGCCACGGAGGACTCCGGGCGGAGCCAGGACT  
ACGTGGCCTTCTGTGGAGAGCCTCTGCAGGTGCAGGGCCGGCCCGAGCCCCCTTCTAGGACAGCTGCGCGCTCA  
GGCGACCCTCAGCCCGGCGGGGAGGCCATGGCATCCCCGGGCGTTGCTTGCTGTGAATTCCTGTCTCTGTGTC

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**FIGURE 5197B**

CCCGACCCCCGAGAGGCCACCTCCAAGCCGCGGGTGCCCCCTAGGGCGACAGGAGCCAGCGGGACGCCGCACGCG  
GCCCCAGACTCAGGGAGCAGGGCCAGGCGGGCTCGGGGGCCGGCCAGGGGAGCACCCCACTCAACTACTCAGAAT  
TTTAAACCATGTAAGCTCTCTTCTTCTCGAAAAGGTGCTACTGCAATGCCCTACTGAGCAACCTTTGAGATTGTC  
ACTTCTGTACATAAACCACCTTTGTGAGGCTCTTTCTATAAATACATATTGTTTAAAAAAAAGCAAGAAAAAAG  
GAAAACAAAGGAAAAATATCCCCAAAGTTGTTTTCTAGATTGTGGCTTTAAGAAAAACAAAACAAAACAAACACA  
TTGTTTTTCTCAGAACCAGGATTCTCTGAGAGGTCAGAGCATCTCGCTGTTTTTTTTGTTGTTGTTTTAAAAATATT  
ATGATTTGGCTACAGACCAGGCAGGGAAAGAGACCCGGTAATTGGAGGGTGAGCCTCGGGGGGGGGGCAGGACGC  
CCCGGTTTTCGGCACAGCCCGGTCACTCACGGCCTCGCTCTCGCCTCACCCCGGCTCCTGGGCTTTGATGGTCTGG  
TGCCAGTGCCCTGTGCCCCACTCTGTGCTGCTGGGAGGAGGCCAGGCTCTCTGGTGCCGCCCTGTGCACCTGG  
CCAGGGGAAGCCCGGGGGTCTGGGGCCTCCCTCCGTCTGCGCCACCTTTGCAGATAAACTCTCTCTCGGGGT  
TGCTATCTTTGTTTCTCTCACCTGAGAGAAACGCAGGTGTTCCAGAGGCTTCCTTGACAGAAAGCACCCCTGC  
ACCTCCTATGGCTCAGGATGAGGGAGGCCCCCCAGGCCCTTCTGGTTGGTAGTGAGTGTTGGACAGCTTCCCAGCTC  
TTCGGGTACAACCTTGAGCAGGTGCGGGGACACAGGGCCGAGGCAGGCCTTCGGGGCCCCCTTTCGCCTGCTTCCG  
GGCAGGGACGAGGCCTGGTGTCTCGCTCCACCCACCCACGCTGCTGTACCTGAGGGGAATCTGCTTCTTAGGA  
GTGGGTTGAGCTGATAGAGAAAAACGGCCTTCAGCCCAGGCTGGGAAGCGCCTTCTCCAGGTGCCTCTCCCTCA  
CCAGCTCTGCACCCCTCTGGGGAGCCTTCCCCACCTTAGCTGTCTCCTGCCCCAGGGAGGGATGGAGGAGATAAT  
TTGCTTATATTAATAAACAATAATGGCTGAGGCAGGAGTTTGGGACCAGCCTGGGCTATATAGCAAGACCCCATC  
ACTACAAATTTTTTACAAATTAGCTAGGTGTGGTGGTGCACCTGTGGTCCCAGCTACTCGGGAGGCTGTGGTG  
GGAGGATTGCTTGAGTCCAGGAGGTTGAGGCTGCAGTCAGCTCAGATTGCACCACTGCACTCCAGCCTGGGCAAC  
AGAGCGAGACCCTGTCTCAAAAAAAAAAAAAAGCAATGTTTATATTATAAAAGAGTGTCTTAACAGTCCCCGGG  
CTAGAGAGGACTAAGGAAAACAGAGAGAGTGTACGCAGGAGCAAGCCTTTCATTTCCTGGTGGGGGAGGGGGG  
CGGTTGCCCTGGAGAGGGCCGGGGTGGGGGAGGTGGGGGGTGTACGCCAAAACGTGGAGGTGTCCCTCTGCACG  
CAGCCCTCGCCCGGCGTGGCGCTGACACTGTATTCTTATGTTGTTTGAATGCTATTATATTGTAAAGAAGCG  
GGCGGGTGCCCCCTGCTGCCCTTGTCCTTGGGGGTACACCCATCCCCTGGTGGGCTCCTGGGCGGCCTGCGCAG  
ATGGGCCACAGAAGGGCAGGCCGAGCTGCACACTCTCCACGAAGGTATCTCTGTGTCTTACTCTGTGCAAAG  
ACGCGGCAAAACCCAGTGCCCTGGTTTTTCCCCACCCGAGATGAAGGATACGCTGTATTTTTTGCCTAATGTCCC  
TGCCTCTAGGTTTATAATGAATTAAAGGTTTATGAACGCTGC

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**FIGURE 5198**

MGSEDHGAQNPSCKIMTFRPTMEEFKDFNKYVAYIESQGAHRAGLAKIIPPKEWKPRQTYDDIDDVVIPAPIQQV  
VTGQSGLFQTQYNIQKKAMTVGEYRRLANSEKYCTPRHQDFDDLERYWKNLTFVSPYIYGADISGSLYDDDDVAQWN  
IGSLRTILDMVERECGTIIIEGVNTPYLYFGMWKTTFAWHTEDMDLYSINYLHFGEPKSWYAIPPEHGKRLERLAI  
GFFPGSSQGCDAFLRHKMTLISPIILKKYGIPFSRITQEAGEFMITFPYGYHAGFNHGFNCAESTNFATLRWIDY  
GKVATQCTCRKDMVKISMDVFRILQPERYELWKQKDLTVLDHTRPTALTSPELSSWSASRASLKAKLLRRSHR  
KRSQPKPKPEDPKFPGEGTAGAALLEEAGGSVKEEAGPEVDPEEEEEEPQPLPHGREAEAEEDGRGKLRPTKA  
KSERKKKSFGLLPPLPPPAHFPSEEALWLPSPLEPPVLGPSPAAMEESPLPAPLNVPPEVPSEELEAKPRPI  
IPMLYVVPRPGKAAFNQEHVSCQQAFAHFQAQKPTWKEPVSPMELTGPEDGAASSGAGRMETKARAGEGQAPSTF  
SKLKMEIKKSRRHPLGRPPTRSPLSVVKQEASSDEEASPFSGEEDVSDPDALRPLLSLQWKNRAASFQAERKFNA  
AAARTEPYCAICTLFYPYCQALQTEKEAPIASLGKGCPTLPSKSRQKTRPLIPEMCFSTSGGENTEPLPANSYIG  
DDGTSPLIACGKCCQLQVHASCYGRPELVNEGWTCSRCAAHAWTAECCLCNLRGGALQMTTDRRWIHWICAIAVP  
EARFLNVIERHPVDISAIPEQRWKLKCVYCRKRMKKVSGACIQCSYEHCSSTSFHVTCAHAAGVLMPEDDWPYVVS  
ITCLKHKSGGHAVQLLRAVSLGQVVITKNRNGLYYRCRVIGAASQTCYEVNFDDGSYSDNLYPESITSRDCVQLG  
PPSEGELVELRWTDGNLYKAKFISSVTSHIYQVEFEDGSQTLTKRGDIFTLEELPKRVR SRLSLSTGAPQEPAF  
SGEEAKAAKRPRVGTPLATEDSGRSQDYVAFVESLLQVQGRPGAPF

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**FIGURE 5199**

TGCGACTGAGTCGGTGGCGAAGACGGGAACGCGACGATGGCGGAGACTCTGCCCGGGTCGGGCGACTCGGGCCCT  
GGCACGGCTTCTCTCGGCCGGGCGTTGCGGAGACTGGGACGAGGCGGCTCAGCGAGCTGCGGGTGATCGATCTG  
CGGGCGGAGCTGAAGAAGCGGAACCTGGACACGGGCGGCAACAAGAGCGTCTGATGGAGCGGCTCAAGAAGGCG  
GTTAAAGAAGAGGGGCAAGATCCTGATGAAATTGGCATCGAGTTAGAAGCCACCAGCAAGAAGTCAGCCAAGAGA  
TGTGTTAAAGGACTGAAGATGGAGGAGGAAGGCACAGAAGATAATGGCCTGGAAGACGATTCCAGAGACGGGCAG  
GAGGACATGGAAGCAAGTCTGGAGAACCTGCAGAATATGGGCATGATGGACATGAGTGTGCTAGACGAAACTGAA  
GTGGCGAATAGCAGTGCTCCAGATTTTGGGGAGGATGGCACGGACGGCCTTCTCGATTCTTTTGTGATAGTAAA  
GAATACGTGGCTGCACAGCTGAGACAGCTCCCGGCTCAGCCCCAGAGCATGCTGTGGATGGGGAAGGATTTAAG  
AACACTTTGGAAACTTCATCGTTGAACCTCAAAGTAACTCCGGACATTGAAGAATCCCTTTTGGAGCCAGAAAAT  
GAGAAAATACTCGACATTTTGGGGGAACTTTGTAATCTGAGCCAGTAAAAGAAGAAAGTTCCGAGCTGGAGCAG  
CCATTTGCACAGGACACAAGTAGCGTGGGGCCAGACAGAAAGCTTGGGAGGAAGAGGACCTATTTGACAGCGCC  
CATCCGGGAAGAGGGTGATTTAGATTTGGCCAGCGAGTCAACAGCACACGCTCAGTCGAGCAAGGCAGACAGCCTG  
TTAGCGGTAGTGAAGAAGGAGCCCGCGGAGCAGCCAGGCGATGGCGAGAGGACGGACTGTGAGCCTGTAGGGCTA  
GAGCCGGCAGTTGAGCAGAGTAGTGCAGCCTCCGAGCTCGCGGAGGCCTCTAGCGAGGAGCTCGCAGAAGCACCC  
ACGGAAGCCCCAAGCCAGAGCCAGAGATAGCAAAGAAGACGGGAGGAAGTTGATTTTACGCTTGTAATGAA  
GTCCCTCCGGCTCCTAAAGAGTCTCAACAGTGAGGGCGCTGATCAGAAAATGAGCTCTTTTAAGGAAGAAAAA  
GATATAAGCCAATCATTAAAGATGAAAAAGTGGGTGCGCAGCGGTTCTGGTCGGAACCTGTGGGTGAGCGGG  
CTGTCTCCACAACACGCGCTACGGATCTCAAGAACCTTTTTCAGCAAGTATGGGAAGGTTGTGCGGGCCAAAGTG  
GTAACGAACGCGCCGAGCCCGGGGGCTCGATGCTATGGATTGCTCACCATGTCGACATCTGACGAGGCGACCAAG  
TGCATCAGCCATCTCCACAGAACTGAGCTGCTGACGAATGATCTCCGTAGAGAAGGCCAAAAATGAGCCTGCT  
GGGAAAAAGCTTTCCGACAGAAAAGAGTGCGAAGTGAAGAAGGAAAAATTATCGAGTGTGACAGACATCATTCT  
GTGGAGATCAAAATTGAAAAAAGTGAATTAAGAAGGAAGAGAAGATTGAGAAGAAGGAGGAAAAAAGCCTGAA  
GACATTAAGAAGGAAGAAAAAGACCAGGATGAGCTGAAACCCGACCTACAAATCGGTCTAGAGTCACCAATCA  
GGAAGCAGAGGAATGGAGCGGACGGTCGTGATGGATAAATCGAAAGGAGAGCCCGTCATTAGCGTGAAGACACA  
AGCAGGTCCAAAGAGAGAAGCTCCAAGAGTCAGGATCGCAAGTCAGAAAGCAAAGAAAAGAGAGACATCTTGTCG  
TTTGATAAAATCAAAGAACAAGGGAGAGAGAGCGCCAGAGGACGCGGAACGGGAGATCCGCGAAACGGAGAGG  
CGGCGGGAGCGCAGCAGCGGGAGCGGGAGCAACGCCTCGAGGCTTCCATGAGCGGAAGGAGAAGGCCCGGCTA  
CAGCGGGAACGCCTGCAGCTCGAGTGCCAGCGCCAGCGGCTGGAGCGGGAGCGCATGGAGCGGGAGCGGCTGGAG  
CGCGAGCGCATGCGCGTGGAGCGTGAGCGCAGGAAGGAGCAGGAGCGCATCCACGCGAGCGCGAGGAGCTGCGG  
CGCCAGCAGGAGCAGCTGCGTTACGAGCAGGAGCGGCGGCCCGGGCGGAGGCCCTACGACCTGGACCGACGAGAT  
GATGCCTATTGGCCAGAAGGAAAGCGTGTGGCAATGGAGGACCGATATCGTGCAGACTTTCCCGGCCAGACCAC  
CGCTTTCAGACTTCGATCATCGAGACCGGGGCCAGTACCAGGACCACGCCATCGACAGGCGGGAGGGTTTCGAGG  
CCAATGATGGGAGACCACCGGATGGGCAGCACTATGGAGATGACCGCATGGCCACGGAGGACCCCAAGAGCGC  
CACGGCCGGGACTCCCGTGATGGCTGGGGGGGCTACGGCTCCGACAAGAGGCTGAGTGAAGGCCGGGGGCTGCCC  
CCTCCCCCAGGGGTGGCCGTGACTGGGGAGAGCACAACCAGCGGCTAGAGGAGCACCAGGCACGCGCCTGGCAG  
GGTGCCATGGACGAGGCGCGCTAGCCGGGAGCAGCCAGGTGGCAAGGTGGCGAGAGGGGCTGTCTGGGCCC  
TCGGGGCCGGGCGACATGGCAAGCCGCGGTGGAGTGGCGGGGCGAGGCGGCTTGCACAAGGTGGACATTCCCAG  
GGCCACGTGGTGCCAGGTGGCGGACTGGAAGGTGGCGGAGTGGCCAGCCAGGACCGGGGACGAGAGTCCCTCAC  
CCACACCTCATCCCCCCCCGTACCCCCACTTCACCCGCGCTACTAAGTCCCACTCGCTGTGAGTTTTCGGGTG  
GGCAGACGCACTGTTGAATCTGTTAGCCAGGGTTCCTCGAACTTGGGGGATCTTTTAAAGCAAAGTAAATCC  
TGCCACCATGTTGTAGCTCAATACAATGTGAATCACTTTTTTTTTTTTTTAAATAAATGTGTTCTGTCTGTC  
CATTTTTAAATCAAGGTTTCTGTTAACGAGGCATTCCATTTCCATTAATAAAGTTTACCATTGCAAAAAAAA  
ATGTGTTCTGTCTGCCATTTTAAATCAAGGTTTCTGTTAACGAGGCATTCCATTTCCATTAATAAAGTTTA  
CCATTGCG



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**FIGURE 5200**

MAETLPGSGDSGPGTASLGPVGAETGTRRLSELRVIDLRAELKKRNLDTGGNKSVLMERLKKAVKEEGQDPDEIG  
IELEATSKKSAKRCVKGLKMEEEGTEDNGLEDDSRDQEDMEASLENLQNMGMMDMSVLDETEVANSSAPDFGED  
GTDGLLDSFCDKEYVAAQLRQLPAQPPEHAVDGEFGKNTLETSSLNFKVTPDIEESLLEPENEKILDILGETCK  
SEPVKEESSELEQFFAQDTSSVGPDRKLAEEEDLFDSAHPPEGDLDLASESTAHQAQSSKADSLAVVKREPAEQP  
GDGERTDCEPVGLEPAVEQSSAASELAEASSEELAEAPTEAPSPEARDESKEDGRKFDFDACNEVPPAPKESSTSE  
GADQKMSSFKEEKDIKPIIKDEKGRVGS SGRNLWVSGLSSTTRATDLKNLFSKYGKVVGAKVVTNARSPGARC  
GFVTMSTSDKATKICISHLRTELHGRMISVEKAKNEPAGKKLSRKECEVKKEKLSSVDRHHSVEIKIEKTVIKK  
EEKIEKKEEKPEDIKKEEKDQDELKPGPTNRSRVTKSGSRGMERTVMDKSKGEPVISVKTTSRSKERSKSKSQD  
RKSESKEKRDILSFDKIKEQRERERQREREREIRETERRREREQREREQRLEAFHERKEKARLQRRERLQLECRQ  
RLERERMERERLERERMRVERERRKEQERIHREERELRRQOEQLRYEQERRPGRRPYDLDRRDDAYWPEGKRVAM  
EDRYRADFPRPDHFRHDFDHRDRGQYQDHAIDRREGSRPMMGDHRDGQHYGDDRHHGHPERHGRDSRDGWGGY  
GSDKRLSEGRGLPPPPRGGRDWGEHNQRLLEEHQARAWQGAMDAGAASREHARWQGGGERGLSGPSGPGHMASRGGV  
AGRGGFAQGGHSQGHVVPGGGLEGGGVASQDRGSRVPHPHPPPPYPHFTRY

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**FIGURE 5201**

GACCGGGGCGTGCGGAGGGATGTGGCCCGGAATATTGGTAGGGGGGGCCCGGGTGGCGTCATGCAGGTACCCCGC  
GCTGGGGCCTCGCCTCGCCGCTCACTTTCCAGCGCAGCGGCGCCGCAGCGGACACTCCAGAACGGCCTGGCCCT  
GCAGCGGTGCCTGCACGCGACGGCGACCCGGGCTCTCCCGCTCATTCCCATCGTGGTGGAGCAGACGGGTTCGGG  
CGAGCGCGCCTATGACATCTACTCGCGGTGCTGCGGGAGCGCATCGTGTGCGTCATGGGCCCCGATCGATGACAG  
CGTTGCCAGCCTTGTTATCGCACAGCTCCTCTTCCTGCAATCCGAGAGCAACAAGAAGCCCATCCACATGTACAT  
CAACAGCCCTGGTGGTGTGGTGACCGCGGGCCTGGCCATCTACGACACGATGCAGTACATCCTCAACCCGATCTG  
CACCTGGTGCCTGGGCCAGGCCGCCAGCATGGGCTCCCTGCTTCTCGCCGCCGGCACCCCAGGCATGCGCCACTC  
GCTCCCAACTCCCGTATCATGATCCACCAGCCCTCAGGAGGCGCCCGGGGCCAAGCCACAGACATTGCCATCCA  
GGCAGAGGAGATCATGAAGCTCAAGAAGCAGCTCTATAACATCTACGCCAAGCACACCAAACAGAGCCTGCAGGT  
GATCGAGTCCGCCATGGAGAGGGACCGCTACATGAGCCCCATGGAGGCCAGGAGTTTGGCATCTTAGACAAGGT  
TCTGGTCCACCCTCCCAGGACGGTGAGGATGAGCCACGCTGGTGCAGAAGGAGCCTGTAGAAGCAGCGCCGGC  
AGCAGAACCTGTCCAGCTAGCACCTTGAGAGCTGGGCCTCCTCTCCAGAATCATGTGGAGGGGCCAGAGGCTTGC  
CAGACCCCGAGCTGGGCCCTGCTCACCCCTTGTTGCTGGGCTTGGAGGGGCCTCTTGAGGAACTTTTAATTTGCA  
GGGGTGCCCGCTATGGACGGGGCATTCCAGCTGAGACACTGTGATTTTAAATTAAATCTTTGTGGTCTT

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**FIGURE 5202**

MWPGILVGGARVASCYPALGPRLAAHFPAQRPPQRTLQNGLALQRC LHATATRALPLIPIVEQTGRGERAYDI  
YSRLLRERIVCMGPIDDSVASLVIAQLFLQSESNKKPIHMYINSPGGVV TAGLAIYDTMQYILNPIC TWCVGQ  
AASMGSLLLAAGTFGMRHSLPNSRIMIHQPSGGARGQATDIAIQAE EIMKLKKQLYNIYAKHTKQSLQVIESAME  
RDRYMSPMEAQEFGILDKVLVHPPQDGEDEPTLVQKEPVEAAPAAEPVPAST

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FIGURE 5203

TGTGGAGCGAAGCCTTGTTCCCGCGTTGAGCCGCCGCCGCCGCCGCCCTCTCAGCTTCAGCCTCCGCGCCAG  
GCCCGGCCCGCCCGCGCCATGTCGGACTACAGCACGGGAGGACCCCCGCCCGGGCCGCCGCCGCCCGCGGGG  
GGCGGGGGAGCCGGAGGCGCCGGGGGAGGCCCTCCGCCGGGCCGCCAGGCGCGGGGGACCGGGCGGCGGGT  
CCCTGCGGGCGGCGCCCGGGCGGGGGTTCGGCCGGGGGCCCTCTCAGCCACCCGCGGAGGCGGCCCGGGAATC  
CGCAAGGACGCTTTTCGCCGACGCCGTGCAGCGGGCCCGCCAGATTGCAGCCAAAATTGGAGGCGATGCTGCCACG  
ACAGTGAATAACAGCACTCCTGATTTTGGTTTTGGGGGCCAAAAGAGACAGTTGGAAGATGGAGATCAACCGGAG  
AGCAAGAAGCTGGCTTCCAGGGAGACTCAATCAGTTCTCAACTTGGACCCATCCATCCTCCCCAAGGACTTCA  
ATGACAGAAGAGTACAGGGTCCCAGACGGCATGGTGGGCTGATCATTGGCAGAGGAGGTGAACAAATTAACAAA  
ATCCAACAGGATTAGGCTGCAAAGTACAGATTCTCCAGACAGCGGTGGCCTACCCGAGCGCAGTGTGTCTTG  
ACAGGAGCCCCAGAATCTGTCCAGAAAGCCAAAGATGATGCTGGATGACATTGTGTCTCGGGGTCTGGGGGCCCC  
CCAGGACAGTTCCACGACAACGCCAACGGGGGCCAGAACGGCACCGTGCAGGAGATCATGATCCCGCGGGCAAG  
GCCGGCCTGGTCAATTGGCAAGGGCGGGGAGACCATTAAAGCAGTGCAGGAACGCGCTGGAGTGAAGATGATCTTA  
ATTAGGACGGATCTCAGAATACGAATGTGGACAAAACCTCTCCGCATCATTGGGGATCCTTACAAAGTGCAGCAA  
GCCTGTGAGATGGTGTGACATCCTCCGGGAACGTGACCAAGCGGCTTTGGGGACCGGAATGAGTACGGATCT  
CGGATTGGCGGAGGCATCGATGTGCCAGTGCCAGGCATTCTGTTGGCGTGGTCAATTGGCCGAGTGGAGAGATG  
ATCAAGAAGATCCAGAATGATGCTGGCGTGGGATACAGTTCAAGCAAGATGACGGGACAGGGCCCCGAGAAGATT  
GCTCATATAATGGGGCCCCCAGACAGGTGCGAGCACGCAGCCCGGATCATCAACGACCTCCTCCAGAGCCTCAGG  
AGTGGTCCCCCAGGTCTCCTCAGGGGTCCAGGCATGCCCCGGGGGGCCGAGGCCGAGGAAGAGGCCAAGGCAAT  
TGGGGTCCCCCTGGCGGGGAGATGACCTTCTCCATCCCCACTCACAAGTGTGGGCTGGTCAATCGGCCGAGGTGGC  
GAGAATGTGAAAGCCATAAACCAGCAGACGGGAGCCTTCGTAGAGATCTCCGGCAGCTGCCACCCAACGGGGAC  
CCCAACTTCAAGTTGTTTCATCATCCGGGGTTCACCCCAGCAGATTGACCACGCCAAGCAGCTTATCGAGGAAAAG  
ATCGAGGGTCTCTCTGCCAGTTGGACCAGGCCAGGTGGCCAGGCCCTGCTGGCCCAATGGGGCCCTTCAAT  
CCTGGGCCCTTCAACCAGGGGCCACCCGGGGTCCCCCACATGCCGGGGGGCCCCCTCCTCACCAGTACCCACCC  
CAGGGCTGGGCAATACCTACCCCCAGTGGCAGCGCCTGCTCCTCATGACCCAAGCAAAGCAGTGCAGCGGCC  
GCGGACCCCAACGCCGCGTGGGCCGCTACTACTCACTACTACCAGCAGCCCCGGGCCCGTCCCCGGCCCC  
GCACCGGCCCTGCGGCCCCACCGGCTCAGGGTGAAGCCCCCTCAGCCCCACCCACCGGCCAGTCGGACTACACT  
AAGGCCTGGGAAGAGTATTACAAAAAGATCGGCCAGCAGCCCCAGCAGCCGGAGCGCCCCACAGCAGGACTAC  
ACGAAGGCTTGGGAGGAGTACTACAAGAAGCAAGCGCAAGTGGCCACCGGAGGGGGTCCAGGAGCTCCCCAGGC  
TCCAGCCAGACTACAGTGGCGCTGGGCGGAATATTACAGACAGCAGGCCGCTTACTACGGACAGACCCAGGT  
CCTGGCGGCCCCAGCGCCGCCACGCAGCAGGGACAGCAGCAGGCTCAATGAATGCAATGAATGTGAATTCT  
TCATCTGTGAAAAATCTTTTTTTTTTCCATTTTGTCTGTTTGGGGCTTCTGTTTGTGTTGGCGAGAGAGCGAT  
GGTGCCGTGGGAGTACTGGGGAGCCCTCGCGGCAAGCAGGGTGGGGGGGACTTGGGGGCATGCCGGGCCCTCAC  
TCTCTCGCCTGTTCTGTGTCTCACATGCTTTTTCTTCAAATTGGGATCCTTCCATGTTGAGCCAGCCAGAGAA  
GATAGCGAGATCTAAATCTCTGCCAAAAAAAAAAAAAATTAATAATTAATAACACAAAGAGCAAAGCAGAACTT  
ATAAAATTATATATATATATATATAATAAAAGTCTCTATTCTTACCCCCAGCCTTCTGAACCTGCCTCTCTGAGG  
ATAAAGCAATTCATTTTCTCCACCTCGGCCCTCTGTTTTTAAATAAACTTTTAAAAAGGAAAAAAAAAAGT  
CACTCTTGCTATTTCTTTTTTTTAGTTAGAGGTGGAACATTCTTGGACCAGGTGTGTATTGCAGGACCCCTTC  
CCCCAGCAGCCAAGCCCCCTCTCTCTCCCTCCCGCCTGGCTCAGCTCCCGCGGCCCGCCCGTCCCCCTCCC  
AGGACTGGTCTGTGCTTTTTCATCTGTTCAAGAGGAGATTGAACTGAAAACAAAATGAGAACAACAAAAAAA  
TTGTATGGCAGTTTTTACTTTTTATCGCTCGTTTTTAACCTCACAAATAAATGATAACAAACCTCAAAAAAAA  
AAAAAAA

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**FIGURE 5204**

MSDYSTGGPPPGPPPPAGGGGGAGGAGGGPPPGPPGAGDRGGGGPCGGGPGGGSAGGPSQPPGGGGPGIRKDAFA  
DAVQRARQIAAKIGGDAATTVNNSTPDFGFGGQKRQLEDGDQPESKKLASQGDSISSQLGPIHPPPRTSMTTEEYR  
VPDGMVGLIIGRGGEQINKIQQDSGCKVQISPDSGGLPERSVSLTGAPESVQAKMMLDDIVSRGRGGPPGQFHD  
NANGGQNGTVQEIMIPAGKAGLVIGKGGETIKQLQERAGVKMILIQDGSQNTNVDKPLRIIGDPYKVQQACEMVM  
DILRERDQGGFGDRNEYGSRIGGGIDVPVPRHSVGVVIGRSGEMIKKIQNDAGVRIQFKQDDGTGPEKIAHIMGP  
PDRCEHAARIINDLLQSLRSGPPGPPGGPGMPPGGGRGRGRGQGNWGPPGGEMTFSIPTHKCLVIGRGGENVKAI  
NQQTGAFVEISRQLPPNGDPNFKLFIIRGSPQQIDHAKQLIEEKIEGPLCPVGP GPGGPGPAGPMGPFNP GPFNQ  
GPPGAPPHAGGPPPHQYPPQGWNTPQWQPPAPHDPSKAAAAAADPNAAWAAYYSHYYQQPPGVP GPAPAPAA  
PPAQGEPPQPPPTGQSDYTKAWEEYYKKIGQQPQQPGAPPQDYTKAWEEYYKKQAQVATGGGPGAPPGSQPDYS  
AAWAEYYRQQAAYYGQTPGPGGPQPPPTQQGQQQAQ

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**FIGURE 5205A**

CTCCTCCCCATCCTCTCCCTCTGTCCCTCTGTCCCTCTGACCTGCACTGTCCCAGCACCATGGGACCCACCTCA  
GGTCCCAGCCTGCTGCTCTGCTACTAACCACCTCCCCCTGGCTCTGGGGAGTCCCATGTACTCTATCATCACC  
CCCAACATCTTGGCGCTGGAGAGCGAGGAGACCATGGTCTGGAGGCCACGACGCGCAAGGGGATGTTCCAGTC  
ACTGTTACTGTCCACGACTTCCCAGGCAAAAACTAGTGTGTCCAGTGAGAAGACTGTGTGACCCCTGCCACC  
AACCACATGGGCAACGTACCTTACGATCCCAGCCAACAGGGAGTTCAAGTCAGAAAAGGGGCGCAACAAGTTC  
GTGACCGTGCAGGCCACCTTCGGGACCCAAGTGGTGGAGAAGGTGGTGTGCTGAGCCTGCAGAGCGGGTACCTC  
TTCATCCAGACAGACAAGACCATCTACACCCTGGCTCCACAGTTCTCTATCGGATCTTACCCGTCAACCACAAG  
CTGCTACCCGTGGGCGGACGGTCATGGTCAACATTGAGAACCCGGAAGGCATCCCGGTCAAGCAGGACTCCTTG  
TCTTCTCAGAACCAGCTTGGCGICTTGCCCTTGTCTTGGGACATTCCGGAACCTCGTCAACATGGGCCAGTGGAA  
ATCCGAGCCTACTATGAAAACCTACCACAGCAGGTCTTCTCCACTGAGTTTGAGGTGAAGGAGTACGTGCTGCCC  
AGTTTCGAGGTTCATAGTGGAGCCTACAGAGAAATTCTACTACATCTATAACGAGAAGGGCCTGGAGGTACCATC  
ACCGCCAGGTTCTCTACGGGAAGAAAGTGGAGGGAAGTGCCTTTGTCTCTTCGGGATCCAGGATGGCGAACAG  
AGGATTTCCTGCTGAATCCCTCAAGCGCATTCCGATTGAGGATGGCTCGGGGGAGGTTGTGCTGAGCCGGAAG  
GTACTGCTGGACGGGGTGCAGAACCCCCGAGCAGAAGACCTGGTGGGGAAGTCTTTGTACGTGTCTGCCACCCTC  
ATCTTGCACTCAGGCAGTGACATGGTGCAGGCAGAGCGCAGCGGGATCCCCATCGTGACCTCTCCCTACCAGATC  
CACTTCACCAAGACACCCAAGTACTTCAAACCAGGAATGCCCTTTGACCTCATGGTGTTCGTGACGAACCCCTGAT  
GGCTCTCCAGCCTACCGAGTCCCCGTGGCAGTCCAGGGCGAGGACACTGTGCAGTCTCTAACCCAGGGAGATGGC  
GTGGCCAAACTCAGCATCAACACACACCCAGCCAGAAGCCCTTGAGCATCACGGTGCGCACGAAGAAGCAGGAG  
CTCTCGGAGGCAGAGCAGGCTACCAGGACCATGCAGGCTCTGCCCTACAGCACCGTGGGCAACTCCAACAATTAC  
CTGCATCTCTCAGTGCTACGTACAGAGCTCAGACCCGGGGAGACCCTCAACGTCAACTTCTCTCTGCGAATGGAC  
CGCGCCCCACGAGGCCAAGATCCGCTACTACACCTACCTGATCATGAACAAGGGCAGGCTGTTGAAGGCGGGACGC  
CAGGTGCGAGAGCCCGCCAGGACCTGGTGGTGTGCCCTGTCCATCACCACCGACTTCATCCCTTCTTCCGC  
CTGGTGGCGTACTACACGTGATCGGTGCCAGCGCCAGAGGGAGGTGGTGGCCGACTCCGTGTGGGTGGACGTC  
AAGGACTCCTGCGTGGGCTCGCTGGTGGTAAAAAGCGGCCAGTCAGAAGACCGGCAGCCTGTACCTGGGCAGCAG  
ATGACCTGAAGATAGAGGGTGACCACGGGGCCCGGGTGGTACTGGTGGCCGTGGACAAGGGCGTGTTCGTGCTG  
AATAAGAAGAACAACCTGACGCAGAGTAAGATCTGGGACGTGGTGGAGAAGGCAGACATCGGTGACCCCCGGC  
AGTGGGAAGGATTACGCCGGTGTCTTCTCCGACGCAGGGCTGACCTTCACGAGCAGCAGTGGCCAGCAGACCGCC  
CAGAGGGCAGAACTTCAGTGCCCGCAGCCAGCCGCCCGCCGACGCCGTTCCGTGCAGCTCACGGAGAAGCGAATG  
GACAAAGTCGGCAAGTACCCCAAGGAGCTGCGCAAGTGTGCGAGGACGGCATGCGGGAGAACCCCATGAGGTTT  
TCGTGCCAGCGCCGGACCCGTTTCATCTCCCTGGGCGAGGCGTGCAAGAAGGTCTTCTGGACTGCTGCAACTAC  
ATCACAGAGCTGCGGCGGCAGCACGCGCGGGCCAGCCACCTGGGCCTGGCCAGGAGTAACCTGGATGAGGACATC  
ATTGCAGAAGAGAACATCGTTTCCCGAAGTGAGTTCCAGAGAGCTGGCTGTGGAACGTTGAGGACTTGAAGAG  
CCACCGAAAAATGGAATCTCTACGAAGCTCATGAATATATTTTGAAGACTCCATCACCAGTGGGAGATTCTG  
GCTGTGAGCATGTGCGACAAGAAAGGGATCTGTGTGGCAGACCCCTTCGAGGTCACAGTAATGCAGGACTTCTTC  
ATCGACCTGCGGCTACCTACTCTGTTGTTGAAACGAGCAGGTGGAAATCCGAGCCGTTCTCTACAATTACCGG  
CAGAACCAAGAGCTCAAGGTGAGGGTGGAATACTCCACAATCCAGCCTTCTGCAGCCTGGCCACCACCAAGAGG  
CGTCACCAGCAGACCGTAACCATCCCCCAAGTCTCTGTTGTCGGTTCCATATGTATCGTCCCGCTAAAGACC  
GGCCTGCAGGAAGTGGAAGTCAAGGCTGCTGTCTACCATCATTTTCATCAGTGACGGTGTGAGGAAGTCCCTGAAG  
GTCGTGCCGAAGGAATCAGAATGAACAAAACCTGTGGCTGTTCGCACCCTGGATCCAGAACGCCTGGGCCGTGAA  
GGAGTGAGAAAGAGGACATCCCACCTGCAGACCTCAGTGACCAAGTCCCGACACCGAGTCTGAGACCAGAATT  
CTCCTGCAAGGGACCCAGTGGCCAGATGACAGAGGATGCCGTGACGCGGAACGGCTGAAGCACCTCATTGTG  
ACCCCTCGGGCTGCGGGGAACAGAACATGATCGGCATGACGCCCACGGTCATCGCTGTGCATTACCTGGATGAA  
ACGGAGCAGTGGGAGAAGTTCGGCCTAGAGAAGCGGCAGGGGGCCTTGAGGCTCATCAAGAAGGGGTACACCCAG  
CAGCTGGCCTTCAGACAACCCAGCTCTGCCTTTGCGGCCTTCGTGAAACGGGCACCCAGCACCTGGCTGACCGCC  
TACGTGGTCAAGGTCTTCTCTGTGGCTGTCAACCTCATCGCCATCGACTCCAAGTCTCTGCGGGGCTGTTAAA  
TGGCTGATCTGGAGAAGCAGAAGCCCCGACGGGGTCTTCCAGGAGGATGCGCCCGTGATACCAAGAAATGATT  
GGTGGATTACGGAACAACAACGAGAAAGACATGGCCCTCACGGCCTTTGTTCTCATCTCGTGCAGGAGGCTAAA  
GATATTGCGAGGAGCAGGTCAACAGCCTGCCAGGCAGCATCACTAAAGCAGGAGACTTCTTGAAGCCAACCTAC

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**FIGURE 5205B**

ATGAACCTACAGAGATCCTACACTGTGGCCATTGCTGGCTATGCTCTGGCCCAGATGGGCAGGCTGAAGGGGCCT  
CTTCTTAACAAATTTCTGACCACAGCCAAAGATAAGAACCGCTGGGAGGACCCTGGTAAGCAGCTCTACAACGTG  
GAGGCCACATCCTATGCCCTCTTGGCCCTACTGCAGCTAAAAGACTTTGACTTTGTGCCTCCCGTCGTGCGTTGG  
CTCAATGAACAGAGATACTACGGTGGTGGCTATGGCTCTACCCAGGCCACCTTCATGGTGTTCGAAGCCTTGGCT  
CAATACCAAAGGACGCCCCCTGACCACCAGGAAGTGAACCTTGATGTGTCCCTCCAAGTGGCCAGCCGAGCTCC  
AAGATCACCCACCGTATCCACTGGGAATCTGCCAGCCTCCTGCGATCAGAAGAGACCAAGGAAAATGAGGGTTTC  
ACAGTCACAGCTGAAGGAAAAGGCCAAGGCACCTTGTCGGTGGTGACAATGTACCATGCTAAGGCCAAAGATCAA  
CTCACCTGTAATAAATTCGACCTCAAGGTCACCATAAAACCAGCACCGGAAACAGAAAAGAGGCCTCAGGATGCC  
AAGAACACTATGATCCTTGAGATCTGTACCAGGTACCGGGGAGACCAGGATGCCACTATGTCTATATTGGACATA  
TCCATGATGACTGGCTTTTGCTCCAGACACAGATGACCTGAAGCAGCTGGCCAATGGTGTGTGACAGATACATCTCC  
AAGTATGAGCTGGACAAAGCCTTCTCCGATAGGAACACCTTCATCATCTACCTGGACAAGGTCTCACACTCTGAG  
GATGACTGTCTAGCTTTCAAAGTTCACCAATACTTTAATGTAGAGCTTATCCAGCCTGGAGCAGTCAAGGTCTAC  
GCCTATTACAACCTGGAGGAAAGCTGTACCCGGTTCTACCATCCGAAAAGGAGGATGGAAAGCTGAACAAGCTC  
TGCCGTGATGAAGTGTGCCGCTGTGCTGAGGAGAATTGCTTCATACAAAAGTCGGATGACAAGGTCACCCCTGGAA  
GAACGGCTGGACAAGGCCTGTGAGCCAGGAGTGGACTATGTGTACAAGACCCGACTGGTCAAGGTTGAGCTGTCC  
AATGACTTTGACGAGTACATCATGGCCATTGAGCAGACCATCAAGTCAGGCTCGGATGAGGTGCAGGTTGGACAG  
CAGCGCACGTTTCATCAGCCCCATCAAGTGCAGAGAAGCCCTGAAGCTGGAGGAGAAGAAACACTACCTCATGTGG  
GGTCTCTCCTCCGATTTCTGGGGAGAGAAGCCCAACCTCAGCTACATCATCGGGAAGGACACTTGGGTGGAGCAC  
TGGCCCGAGGAGGACGAATGCCAAGACGAAGAGAACCAGAAACAATGCCAGGACCTCGGCGCCTTCACCGAGAGC  
ATGGTTGTCTTTGGGTGCCCAACTGACCACACCCCATTC

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**FIGURE 5206**

GGCCGCGGTGGTGGCTGCGGCGGCGGCGGCGGAGCAGCATGGATTGGGGCACTGAGCTGTGGGATCAGTTTCGAG  
GTGCTCGAGCGCCACACGCAGTGGGGGCTGGACCTGTTGGACAGATATGTAAAGTTCGTGAAAGAACGCACCGAA  
GTGGAACAGGCTTACGCCAAACAAGTGGGAGCCTGGTGAAAAAATATCTGCCCAAGAGACCTGCCAAGGATGAT  
CCTGAGTCCAAATTCAGCCAGCAACAGTCTTCGTACAGATTCTCCAGGAGGTGAATGACTTTGCAGGCCAGCGG  
GAGCTGGTGGCTGAGAACCCTAGTGTCCGTGTATGTCTTGAGCTGACCAAGTACTCACAAGAGATGAAACAGGAG  
AGGAAGATGCACCTTCCAAGAAGGGCGGCGGGCCAGCAGCAGCTGGAAAATGGCTTTAAACAGCTGGAGAATAGT  
AAGCGTAAATTTGAGCGGGACTGCCGGGAGGCAGAGAAGGCAGCCAGACTGCTGAACGGCTAGACCAGGATATC  
AACGCCACCAAGGCTGATGTGAGAAGGCCAAGCAGCAAGCCCACCTTCGGAGTCACATGGCCGAAGAAAGCAAA  
AACGAATATGCGGCTCAACTGCAGCGCTTCAACCAGAGACCAAGCCCACCTTCTATTTTTCACAGATGCCCCAGATA  
TTCGATAAGCTCCAAGACATGGATGAACGCAGGGCCACCCGCTGGGTGCCGGGTATGGGCTCCTGTCCGAGGGCC  
GAGCTGGAGGTGGTGCCCATTAATAGCCAAGTGCTTGGAGGGCATGAAGGTGGCTGCAAAATGCTGTGGATCCCAAG  
AACGACTCCCACGTCTTATAGAGCTGCACAAGTCAGGTTTTTGCCCGCCGGGCGACGTGGAATTCGAGGACTTC  
AGCCAGCCCATGAACCGTGCACCTCCGACAGCAGTCTGGGCACCCCTCGGATGGACGGCCTGAACCTCCGAGGC  
CCGGGTTCGAGCCGCACCAAGCGCTGGCCTTTTGCAAGAAGAACAAGACAGTGGTGACCGAGGATTTTAGCCAC  
TTGCCCCCAGAGCAGCAGCGAAAACGGCTTCAACAGCAGTTGGAAGAACGCAGTCGTGAACCTTCAGAAGGAGGTT  
GACCAGAGGGAAGCCCTAAAGAAAATGAAGGATGTCTATGAGAAGACACCTCAGATGGGGGACCCGCCAGCTTG  
GAGCCCCAGATCGCTGAAACCTGAGCAACATTGAACGGCTGAAATTGGAAGTGCAGAAGTATGAGGCGTGGCTG  
GCAGAAGCTGAAAGTCGAGTCCTTAGCAACCGGGGAGACAGCCTGAGCCGGCACGCCCGGCTCCCGACCCCCC  
GCTAGCGCCCCGCCAGACAGCAGCAACAGCGCATCACAGGACACCAAGGAGAGCTCTGAAGAGCCTCCCTCA  
GAAGAGAGCCAGGACACCCCCATTACACGGAGTTTGATGAGGATTTTCGAGGAGGAACCCACATCCCCCATAGGT  
CACTGTGTGGCCATCTACCACTTTGAAGGTCCAGCGAGGGCACTATCTCTATGGCCGAGGGTGAAGACCTCAGT  
CTTATGGAAGAAGACAAAGGGGACGGCTGGACCCGGGTGAGCGGAAAGAGGGAGGCGAGGGCTACGTGCCACCC  
TCCTACCTCCGAGTCACGCTCAATTGAACCTGCCAGAGACGGGAAGAGGGGGGCTGTCGGCTGCTGCTTCTGGG  
CCACGGGGAGCCCCAGGACCTATGCACTTTATTTCTGACCCGTTGGCTTCGGCTGAGACCTGTGTAACCTGCTGC  
CCCCCTCCACCCCAACCCAGTCTACCTGTACACCGGACGGACCCGCTGTGCCTTCTACCATCGTTCCACCATT  
GATGTACATACTCATGTTTTACATCTTTCTTTCTGCGCTCGGCTCCGGCCATTTTGTTTTATACAAAATGGGT  
TTTTTTTTTTCTTTAATATATTTCAAGAGATTTTTTTTTTTTTTTTTTTT



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**FIGURE 5207**

MDWGTTELWDQFEVLERHTQWGLDLLDRYVKFVKERTEVEQAYAKQLRSLVKKYLPKRPAKDDPESKFSQQQSFVQ  
ILQEVNDFAGQRELVAENLSVRVCLELTKYSQEMKQERKMHFQEGRRQQQLENGFKQLENSKRKFERDCREAEK  
AAQTAERLDQDINATKADVEKAKQQAHLRSHMAEESKNEYAAQLQRFNRDQAHFYFSQMPQIFDKLQDMERRAT  
RLGAGYGLLSEAELEVVP IIAKCLEGMKVAANAVDPKNDSHVLIELHKSGFARPGDVEFEDFSQPMNRAPSDSSL  
GTPSDGRPELRGPGRSRTKRWPF GKKNKT VVTEDFSHLPPEQQRKRLQQLEERSRELQKEVDQREALKKMKDVY  
EKT PQMGDPASLEPQIAETLSNIERLKLEVQKYEAWLAEAESRVLSNRGDSL SRHARPPDPPASAPPDSSSNSAS  
QDTKESSEEPPEESQDTP IYTEFDEDFEEPTSPIGHCVAIYHFEGSSEGTISMAEGEDLSLMEEDKGDGWTRV  
RRKEGEGGYVPTSYLRVTLN

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## FIGURE 5208

CGGGGGTGACAGCAGCCCGGAGCCGGGAGCCTCAGCTTCCGCCTGGACCCAGCCTCGTGGGAGCCCCGCGGGTC  
CTGCCCAGATGTGGAAGACTGAGGCCTGTTGAAAGTGCAGAGCTCAGCCCTGGCACCCCTCTGTTCCCAAGAGCTC  
**CATG**CAGGTGCCACAGGATGGAGAAGACCTTGCTGGCCAACCCTGGTACCACGGCCTCCTGTCCCGCCAGAAGGC  
TGAAGCTCTTCTTCAGCAAGATGGCGACTTCTGTTTCGCGCCTCTGGGTCCCGTGGGGGCAACCCCGTGATCTC  
CTGCCGCTGGCGGGGCTCAGCCCTCCATTTTGAAGTGTTCGTTGTGGCCCTGCGTCCCCGGCCAGGCCGACCCAC  
AGCCCTCTTTCAACTGGAGGATGAGCAATTCCCCAGCATACCGGCTCTGGTTCACAGTTATATGACAGGCAGGCG  
CCCAGTGTCCAGGCCACAGGGGCTGTGGTCTCCAGGCCTGTGACTTGGCAGGGGCTCTGCGACGCAGCTTTAG  
CGAGGACACCCTGATGGATGGCCAGCTCGGATAGAGCCTCTCAGGGCAAGGAAGTGGAGCAACAGTCAGCCTGC  
AGATTTGGCACATATGGGGCGGTCAAGAGAAGACCCCGTGGGATGGAAGCCTCCACCATGCCATATCTGCCTT  
GCCCCGAACGAGCAGTGACCCGGTGTGCTGAAGGCCCTGCTCCCTGGGAAGTGTGCGACAGTCTCAGGGC  
CTCCGATGGGAGCTTCAAGCCAAGGCACCAACGAAGCCCCCGACACCCTCCTTCGAACTGCCTGATGCCTC  
TGAACGTCCCCGACGTACTGCGAGCTGGTGTCCCGAGTGTCCAGGGAACATCCCCGAGCCAAAGCTG  
CCCAGAGCCAGAGGCCCATGGTGGGAGGCCGAGGAGGATGAGGAGGAAGAGAATAGATGTTTTACAAGACCACA  
GGCTGAGATCTCTTTCTGCCCCATGATGCCCCCTCTGCTGCTGGGCCCCAGAATCGGCCCTGGAACCCCA  
AGTCTGCATACCCTCCGTGGCCTGTTCTGAGCACCATCCTGGGAGCACCGCCCTTCACCTGCTATTGGTAGA  
CTGCCAGGCCACAGGCCTCCTGGGAGTGACCAGAGATCAGCGGGGCAACATGGGAGTCTCATCTGGCCTGGAGCT  
GCTCACTCTTCCCCATGGACACCACTTGAGGTTGGAAGTGTGAGAGGCATCAGACACTGGCGCTGGCCGGGGC  
GCTGGCGGTGCTGGGCTGCTCGGGGCCGCTGGAGGAGCGCGCAGCCGCACTGAGGGGACTGGTAGAGCTGGCGCT  
GGCGCTGCGGCCAGGGGCGGCGGGGGACCTGCCGGGCTGGCTGCAGTCATGGGCGCCCTGCTCATGCCCCAGGT  
GTCCCGGTTGGAGCACACGTGGCGCCAGCTCCGAAGGAGCCACACGGAGGCTGCGCTGGCCTTTGAGCAGGAGCT  
GAAGCCGCTGATGCGGGCTCTGGATGAGGGCGCTGGACCCTGCGACCCCGGCGAGGTGGCGCTGCCGCACGTGGC  
ACCCATGGTTGCGCTACTGGAGGGCGAGGAAGTGCGGGGCCGCTGGACGAGAGCTGTGAGCGGCTGTTGCGCAC  
CCTGCACGGGGCGCGTCACATGGTCCGGGACGCACCCAAATTCCGCAAGGTGGCAGCCAGCGCCTGCGAGGATT  
CCGGCCTAACCCGGAGCTGAGGGAGGCCCTGACCACCGGCTTCGTGCGGAGGCTGCTCTGGGGTAGCCGGGGCGC  
GGGAGCTCCGCGCGCTGAACGCTTTGAGAAGTTCCAGCGCTCCTCGGCGTCTGTGCGAGCGCCTGGAGCCTGA  
CCGCT**GA**GAGCGCAGACACCCTTCTTCACACCCGGGACCCCCAGGTTTTTGCGAACCCAGAAGAGACCAAAGGA  
GTCGTCCCAGGCTCCTCGGCCTCAGGTGGAATCCTGCCCTGTGCCTCACAGAAGAGGTGGGGACCGCAGTCAGG  
GTCACCTGGACCATGGTGAACATGTGACCTGCAGATCTGGCATCAGAGGCCAGAGTTCAAATGTGACTCCACCTC  
TTAAAAGCCGTGATTTCTAGCAGTTGACTTCACCTCTGTGTCGGCCTTTAACAAAATCATAGCCATACAGCAGCT  
CAGGCCTGTAATCTCAGCACTTTGGGAGGCCGAGGCGGAAGGAAGGCTTGAGGCCAGGAGTTCAAGACCAGCCAG  
GGCAACATGGTGAGACCTCATCTCTACAAAACTGAAAAATAAAAACTTTTAAAAATGTAAAAAAAAAAAAAA  
AA

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**FIGURE 5209**

MQVPQDGEDLAGQPWYHGLLSRQKAEALLQDGDFLVRASGSRGGNPVISCWRGSAHFVFRVALRPRPGRPT  
ALFQLEDEQFPSIPALVHSYMTGRRPLSQATGAVVSREPVWQGPLRRSFSEDTLMDGPARIEPLRARKWSNSQPA  
DLAHMGRSREDPAGMEASTMPI S ALPRTSSDPVLLKAPAPLGTVADSLRASDGQLQAKAPTKPPRTPSFELPDAS  
ERPPTYCELVPRVPSVQGTSPSQSCPEPEAPWWEAEDEEEENRCFTRPQAEISFCPHDAPSCLLGPQNRPLEPQ  
VLHTLRGLFLEHHPGSTALHLLLVDCQATGLLGVTRDQRGNMGVSSGLELLTLPHGHHLRLELLERHQTALAGA  
LAVLGCSGPLEERAAALRGLVELALALRPGAAGDLPGLAAVMGALLMPQVSRLEHTWRQLRRSHTAALAFEQEL  
KPLMRALDEGAGPCDPGEVALPHVAPMVRLLEGEVAGPLDESCERLLRTLHGARMVRDAPKFRKVAQRLRGF  
RENPELREALTTGFVRLLWGSRGAGAPRAERFEKFQRVLGVLQRLEPDR

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**FIGURE 5210**

AGGGAAGACACGCGTGACCCGGAAGGTCTTCCCGCCACACTCCAGAGCGGATGTGAGGGGCGCCGATGGCGGAGG  
GAACGGCGGAGGCTCCTCTAGAGAATGGTGGTGGTGGCGACTCGGGAGCCGGAGCTTTGGAACGAGGAGTGGCGC  
CCATTAAGCGTCAATACCTCACCACCAAGGAGCAGTTTCACCAATTCTTGGAAGCCAAAGGGCAGGAGAAGACTT  
GCCGGGAAACCGAGCTGGACATCCGTGGCAAACCTTTACCTGGCCCCCTCACCACGTGTGGGAACCTGCCCTTCC  
GACGGATCTGCAAGCGCTTCGGGGCGGATGTGACATGTGGAGAGATGGCCGTCTGCACCAACCTGCTGCAGGGCC  
AGATGTCCGAGTGGGCCCTACTCAAACGCCACCAGTGTGAGGACATCTTTGGCGTCCAGCTGGAGGGCGCCTTCC  
CCGACACCATGACCAAGTGTGCCGAGCTGCTGAGCCGCACCGTGGAGGTGGACTTTGTGGACATCAACGTCGGCT  
GCCCCATCGACCTCGTGTACAAGAAGGGTGGGGGCTGTGCCCTCATGAATCGCTCCACCAAGTTCCAGCAGATCG  
TCCGTGGCATGAACCAGGTGCTGGATGTGCCGCTGACTGTGAAGATCCGCACAGGCGTCCAGGAGCGTGTGAACC  
TGGCGCACCGCCTGTGCCGAGCTGCCGGACTGGGGCGTGGCACTCGTCACGCTCCACGGCCGCTCTCGGGAGC  
AGCGCTACACCAAGCTAGCCGACTGGCAGTACATCGAGGAGTGCCTGCAGGCCGCCAGCCCCATGCCCTGTTCG  
GAAATGGGGACATCTTGTCAATTTGAGGATGCCAACC GCGCCATGCAGACTGGTGTACCCGGGATCATGATTGCC  
GTGGCGCCCTGCTCAAGCCGTGGCTCTTCACGGAGATCAAGGAGCAGCGGCACTGGGACATCTCGTCTGCCGAGC  
GCCTGGACATCTTGCGGGACTTCACCAACTACGGCCTGGAGCACTGGGGCTCGGACACGCAGGGCGTGGAGAAGA  
CCCGGCGCTTTCTGCTCGAGTGGCTGTCTTCTGTGCCGCTACGTGCCCGTGGGGCTGCTGGAGCGGCTCCCAC  
AGAGGATCAACGAGCGGCCGCCCTACTACCTGGGCCGCGACTACCTGGAGACGCTGATGGCCAGCCAGAAGGCAG  
CCGACTGGATCCGCATCAGCGAGATGCTCCTTGGGCCAGTCCCCCCCAGCTTCGCCTTCTTGCCGAAGCACAAAG  
CCAACGCGTACAAGTAGCCTCAGGCTTTCCCAGGGGCACCCTGGGGCGAGGAGAGTACAATAAATTTTATTCTTT  
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**FIGURE 5211**

MAEGTAEAPLENGGGGDSGAGALERGVAPIKRQYLTTKEQFHQFLEAKGQEKTCRETEVGDPAGNELAEPEAKRI  
RLEDGQTADGQTEEAEPGEQLQTQKRARGQNKGRPHVKPTNYDKNRLCPSLIQESAAKCFFGDRCRFLHDVGRY  
LETKPADLGPRCVLFETFGRCPYGVTCRFAGAHLRPEGQNLVQEELAARGTQPPSIRNGLDKALQQQLRKREVR  
ERAEQALRRFSQGPTPAAAVPEGTAEGAPRQENCGAQQVPAGPGTSTPPSSPVRTCGPLTDEDVVRLRPCEKKR  
LDIRGKLYLAPLTTGNLFFRRICKRFGADVTCGEMAVCTNLLQGQMSEWALLKRHQCEDIFGVQLEGAFPDTMT  
KCAELLSRTVEVDFVDINVGCPIDLVIKGGGKCALMNRSTKFQQIVRGMNQVLDVPLTVKIRTGVQERVNLHRL  
LPELRDWGVALVTLHGRSREQRYTKLADWQYIEECVQAASPMPLFGNGDILSFEDANRAMQTGVTGIMIARGALL  
KPWLFTEIKEQRHWDISSERLDILRDFTNYGLEHWGSDTQGVKTRRFLLEWLSFLCRYVPVGLLERLPQRINE  
RPPYYLGRDYLETLMASQKAADWIRISEMLLGPVPPSFAFLPKHKANAYK

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**FIGURE 5212**

CGGGTTTTCCAATCTCTGTGTAGCTAGCAGTTCTCTTCGTGTTAGTGTGGCAGCCGTGCCAGTTCCACATTTGTG  
ATTGCTTTTATTTCCCTGGTAATTAAACCTTGTGCCATTCTATTCCCTGTTAAATCCGTAGAAAATGAGAAAATACT  
CGACATTTTGGGGGAACTTGTAAATCTGAGCCAGTAAAAGAAGAAAGTTCCGAGCTGGAGCAGCCATTGACACA  
GGACACAAGTAGCGTGGGGCCAGACAGAAAGCTTGCGGAGGAAGAGGACCTATTTGACAGCGCCCATCCGGAAGA  
GGGTGATTTAGATTTGGCCAGCGAGTCAACAGCACACGCTCAGTCGAGCAAGGCAGACAGCCTGTTAGCGGTAGT  
GAAAAGGGAGCCCGCGGAGCAGCCAGGCGATGGCGAGAGGACGGACTGTGAGCCTGTAGGGCTAGAGCCGGCAGT  
TGAGCAGAGTAGTGC GGCCCTCCGAGCTCGCGGAGGCTCTAGCGAGGAGCTCGCAGAAGCACCCACGGAAGCCCC  
AAGCCCAGAAGCCAGAGATAGCAAAGAAGACGGGAGGAAGTTTGATTTTGACGCTTGAATGAAGTCCCTCCGGC  
TCTAAAGAGTCTCAACCAGTGAGGGCGCTGATCAGAAAATGAGGTTTGTTTTTCTCAGTTTTAGACCAGACG  
CTATCTCCTTTTCATTGGTCATGTAATGACACACATAAGCTGTTTTTTCTGCAATTGGCCAGCCAGACTGACGA  
AATTGTAGTTTTGCTTCTAAAGAATGTTTTCGTTTTCTTTGTGTGTTTTTAATGGGTGATTCAATTCCTTTCTT  
TTTCTCAACCTACCATGGTTGTGTTCTTAAATTCTTCTAATTACCTTTAGCCCAGCAGAATTAATTAACCTCTG  
TGGGTCTGAAATCTTATGGTTAGGTCAGATTTTCAATACAAGTTTGTCGGGGTATCATTTTTTTCAGAACTAAATT  
TCGGGTAGGTATGCAACCTCAGCACGAATTTTATGGTTTTGAGTTTTGTTTCTCCATGCTGCTTCCTTGTTGGAGT  
GACATTGTCTTTTGTCTCTAGTTCTCCCGAAGATGACTCGGATACAAAAAGGCTTTCCAAAGAGGAAAAGGGTCG  
CAGCAGTTGTGTTAGAAATTTCTGGGTTAGTGGA CTCTTCTACAACCAGAGCTACAGATTTGAAGAATCTTTT  
CAGCAAATATGGGAAGGTGGTGGGCGCCAAGGTTGTGACAAATGCCCGGAGTCTGGAGCTCGCTGTTACGGTTT  
TGTCACGATGTCCACAGCAGAAGAGGCCACAAAATGCATTAACCACCTGCACAAGACGGAGCTCCACGGAAGAT  
GATCTCCGTGGAGAAAGCCAAAAATGAACCTGTGGGAAAAGAAAACCTCTGACAAAAGAGACAGTGACGGGAAAAA  
GGAGAAGTCGAGCAACAGTGACAGATCTACAAACCTTAAGAGGGATGATAAATGTGACAGAAAAGATGATGCTAA  
GAAGGGTGACGACGGAAGTGAGAAAAGAGTAAGGACCAAGATGATCAGAAACCTGGCCCCCTCAGAGCGATCTCG  
AGCCACAAAGTCAGGAAGTCGAGGGACCGAACGGACTGTAGTAATGGATAAATCCAAAGGGGTGCCTGTGATTAG  
TGTA AAAACGTCCGGGTCCAAAGAGAGAGCTTCCAAAAGCCAGGATCGCAAATCAGCCAGCAGAGAGAAGCGGTC  
CGTCGTGTCCTTTGATAAGGTCAAGGAGCCTCGGAAGTCAAGAGACTCAGAGTCCCATAG

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**FIGURE 5213**

CGAACTCCGCCCTCTTCTCCGCTAGGCCAGCTCCCTGAAGCGGCTGTTTCGAGCCACGCGCCCATCGGGTA  
CCGAGGCACGCGCCGGGCGTCACGTGCGTTTCGCGGCGAGCGGAAATGACGCGAGTTGTGTGAGCCGCCAGTATG  
GCCGGGCTATGGCGGCGAGCACTGGCTACGTGCGACTGTGGGGAGCGGCGCGGTGCTGGGTGCTGCGGCGGCCGA  
TGCTGGCCGCCCGCGGGGGCGGTTCCCACTGCAGCAGGAGCGTGGTTGCTCCGAGGCCAGCGGACCTGCGACG  
CCTCTCCTCCTTGGGCACTGTGGGGCCGAGGCCCGCAATTGGGGGCCAATGGCGGGGTTTTGGGAAGCGAGCA  
GCCGCGGCGGAGGCGCATTCTCGGGGGCGAGGACGCCCTCCGAGGGCGGCGGAGGAAGGAGCCGCGGCGCGG  
GGGGCAGCGCGGCGCGCGGGGAAGGCCCGGTCTAACGGCGCTCACGCCCATGACGATCCCCGATGTGTTTCCGC  
ACCTGCCGCTCATCGCCATCACCCGCAACCCGGTGTTCGCGCTTTATCAAGATTATCGAGGTTAAAAATAAGA  
AGTTGGTTGAGCTGCTGAGAAGGAAAGTTCGTCTCGCCAGCCTTATGTCGGCGTCTTTCTAAAGAGAGATGACA  
GCAATGAGTCGGATGTGGTCGAGAGCCTGGATGAAATCTACCACACGGGGACGTTTGCCAGATCCATGAGATGC  
AGGACCTTGGGGACAAGCTGCGCATGATCGTCATGGGACACAGAAGAGTCCATATCAGCAGACAGCTGGAGGTGG  
AGCCCCGAGGAGCCGGAGGCGGAGAACAAGCACAAAGCCCCGAGGAAGTCAAAGCGGGGCAAGAAGGAGCGGAGG  
ACGAGCTGAGCGCCAGGCACCCGCGGAGCTGGCGATGGAGCCCACCCCTGAGCTCCCGGCTGAGGTGCTCATGG  
TGGAGGTAGAGAACGTTGTCCACGAGGACTTCCAGGTACGAGGAGGTGAAAGCCCTGACTGCAGAGATCGTGA  
AGACCATCCGGGACATCATTGCCTTGAACCTCTCTACAGGGAGTCAGTGTGTCAGATGATGCAGGCTGGCCAGC  
GGGTGGTGGACAACCCCATCTACCTGAGCGACATGGGCGCGCGCTCACCGGGGCCGAGTCCCATGAGCTGCAGG  
ACGTCTTGAAGAGACCAATGTGGAGGAGAAGATCAAGCAGACCCACCGTAAQTACCTGCTGCAGGAGCAGCTAA  
AGATCATCAAGAAGGAGCTGGGCTGGAGAAGGACGACAAGGATGCCATCGAGGAGAAGTTCCGGGAGCGCCTGA  
AGGAGCTCGTGGTCCCCAAGCACGTCATGGATGTTGTGGACGAGGAGCTGAGCAAGCTGGGCCTGCTGGACAACC  
ACTCCTCGGAGTTCAATGTCACCCGCAACTACCTAGACTGGCTCACGTCCATCCCTTGGGGCAAGTACAGCAACG  
AGAACCTGGACCTGGCGCGGGCACAGGCAGTGTGGAGGAAGACCACTACGGCATGGAGGACGTCAGAAACGCA  
TCCTGGAGTTTATTGCCGTTAGCCAGCTCCGCGGCTCCACCCAGGGCAAGATCCTCTGCTTCTATGGCCCCCTG  
GCGTGGGTAAGACCAGCATTGCTCGCTCCATCGCCCGCGCCCTGAACCGAGAGTACTTCCGCTTCAGCGTCGGGG  
GCATGACTGACGTGGCTGAGATCAAGGGCCACAGGCGGACCTACGTGGGCGCCATGCCCGGGAAGATCATCCAGT  
GTTTGAAGAAGACCAAGACGGAGAACCCCTGATCTCATCGACGAGGTGGACAAGATCGGCCGAGGCTACCAGG  
GGGACCCGTCGTCGGCACTGCTGGAGCTGCTGGACCCAGAGCAGAATGCCAACTTCTGGACCACTACCTGGACG  
TGCCCGTGGACTTGTCCAAGGTGCTGTTTCATCTGCACGGCCAACGTCACGGACACCATCCCCGAGCCGCTGCGAG  
ACCGTATGGAGATGATCAACGTGTCGGGCTACGTGGCCAGGAGAAGCTGGCCATTGCGGAGCGCTACCTGGTGC  
CCCAGGCTCGCGCCCTGTGTGGCTTGGATGAGAGCAAGGCCAAGCTGTCATCGGACGTGCTGACGCTGCTCATCA  
AGCAGTACTGCCGCGAGAGCGGTGTCCGCAACCTGCAGAAGCAAGTGGAGAAGGTGTTACGGAATCGGCCTACA  
AGATTGTACGCGCGAGGCCGAGTCCGTGGAGGTGACGCCCAGAGAACCTGCAGGACTTCGTGGGGAAGCCCGTGT  
TCACCGTGGAGCGCATGTATGACGTGACACCGCCCGCGTGGTTCATGGGGCTGGCCTGGACCGCAATGGGAGGCT  
CCACGCTGTTTGTGGAGACATCCCTGAGACGGCCACAGGACAAGGATGCCAAGGGTGACAAGGATGGCAGCCTGG  
AGGTGACAGGCCAGCTGGGGGAGGTGATGAAGGAGAGCGCCCGCATAGCCTACACCTTCCGAGAGCCTTCCTCA  
TGCAGCACGCCCCCGCCAATGACTACCTGGTGACCTCACACATCCACCTGCATGTGCCGAGGGCGCCACCCCCA  
AGGACGGCCCAAGCGCAGGCTGCACCATCGTCACGGCCCTGCTGTCCCTGGCCATGGGCAGGCCTGTCCGGCAGA  
ATCTGGCCATGACTGGCGAAGTCTCCCTCACGGGCAAGATCCTGCCTGTTGGTGGCATCAAGGAGAAGACCATTG  
CGGCCAAGCGCGCAGGGGTGACGTGCATCGTCTGCCAGCCGAGAACAAAGAAGGACTTCTACGACCTGGCAGCCT  
TCATCACCGAGGGCCTGGAGGTGCACTTCGTGGAACACTACCGGGAGATCTTCGACATCGCCTTCCCGGACGAGC  
AGGCAGAGGCGCTGGCCGTGGAACGGTGACGGCCACCCGGGACTGCAGGCGGCGGATGTCAGGCCCTGTCTGGG  
CCAGAAGTGAAGCTGTGGGGAGCGCGCCCGGACCTGGCAGTGGAGCCACCGAGCGAGCAGCTCGGTCCAGTGAC  
CCAGATCCCAGGGACCTCAGTCGGCTTAATCAGAGTGTGGCATAGAAGCTATTTAATGATTAAAGTCATTTGCAG  
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**FIGURE 5214**

GGAGGGCTTAAGGAAGTAAATATGGCGGACCTGGCGAACGAAGAAAAGCCTGCCATTGCTCCGCCCGTCTTTGTGT  
TTCAGAAGGATAAAGGACAAAAGTCCCCTGCAGAGCAAAAAAACTTGTCGGATTCCGGAGAGGAGCCTCGGGGGG  
AGGCTGAGGCCCCCACCATGGCACGGGTACCCCGAGTCAGCTGGCGAGCATGCCCTAGAACCTCCTGCCCTG  
CTGGCGCCTCAGCCAGCACTCCTCCGCCTCCCGCTCCTGAAGCCCAGCTTCTCTTTTCCGCGAGAAGTGGCAG  
GGAGGTACAGCTGGCGGCTCCAGTCTGAAGGCGGAGAAGATTCTGACAGAGAAGATGGAAATTACTGCCCTCCTG  
TCAAGCGAGAAAAGAACATCTCTTTAACCCAGTTCCACCCCTCACAGTCAGAGGAAAGGAGCAGTGGCTTCCGGT  
TGAAGCCACCAACGCTGATCCACGGCCAAGCCCCAGCGCAGGTCTGCCAAGCCAGAAGCCCCAAGGAGCAGCAGC  
GGAGCGTGCTTCGCCCCGCGAGTGTTACAAGCTCCGCAGCCAAAGGCGCTGTCCAGACTGTCCCCAGCAGTGGCA  
CCAACGGGGTCAGCCTCCCAGCAGACTGCACGGGGGCGAGTGCCCGCAGCATCCCCTGACACTGCTGCATGGAGAA  
GTCTTTCCGAAGCTGCCGATGAGGAGAAAGAGCCCCAGAAAAATGAGTCCAGCAATGCCTCTGAAGAGGAAGCCT  
GTGAGAAAAAAGACCCCGCCACACAGCAAGCCTTTGTATTTGGGCAGAACTTGAGGGACAGAGTTAAGCTGATAA  
ATGAGAGCGTGGACGAAGCCGACATGGAGAATGCTGGACACCCAGCGCAGACACGCCAACCGCAACGAATATT  
TCCTCCAGTATATCAGTTCCAGTTTAGAGAACTCAACCAATAGTGCCGACGCCTCCAGCAACAAATTTGTATTTG  
GCCAGAACATGAGCGAGCGAGTTTTGAGCCCCCAAAATTAACAGAGGTCAAGTTTCCAGTGCACACAGGGAAAATG  
CAGCTGCCGAGTCAGGGTCTGAGTCTCGTCCAGGAGGCCACCCCTGAGAAAGGGTCCCTGGCTGAGTCGGCAG  
CCGCTACACCAAGGCAACAGCGCGGAAGTGTGTTGTTGAAAAAGTGGAAAGTCATCACCGGGGAGGAGCGGAGA  
GCAATGTGTTACAGATGCAGTGCAAGCTGTTGTCTTTGACAAGACCTCACAGTCTGGGTGGAGAGAGGCCGGG  
GGCTGCTCAGACTCAATGACATGGCGTCCACCGATGACGGCACACTACAGTCCCGACTAGTGATCGGACCCAGG  
GGAGCCTGCGACTGATCTCAACACCAAGCTGTGGGCCAGATGCAGATCGACAAGGCCAGCGAGAAGAGCATT  
GCATCACAGCCATGGACACCGAGGACCAGGGCGTGAAGGTCTTCTGATCTCGGCCAGCTCCAAGGACACAGGTC  
AGTTGTATGCAGCCCTGCACACCGCATCTGGCCCTGCGCAGCCGCGTGGAGCAGGAGCAGGAGGCCAAGATGC  
CCGCGCTGAGCCTGGGGCAGCCCCATCCAACGAGGAGGACGACAGCGACGATGACGATGTCTGGCTCCTTCAG  
GGGCCACCGCAGCTGGTGTGGTGACGAAGGGGACGGGCAGACGACCGGGAGCACATAGCGGGCCGGAGCCCGGC  
TGCACACCAGGCTGCTGCTTTGTCCGTCTATCCACCGCCCCACCGCCCCCACCACCGGCAGCGTCCAGGTGC  
GGGGCCGGGAACCACACACCCCACTGGGCCGGCCACAGTCTGGACCCGCACGTCTGTTCAAAAGCAGACTCGGG  
AACTGCCTGAATGTGGTTTGGGACACGAGACCTCATCATATTGATGAGCGAACAACAAGAACATTTCTCCCTC  
CCCTCCTTTGAATTGAATGGCACATTAAGACTTGTACGGCTTCTCACTGGGACTGGAGACCTCGTTCTTCAC  
CCCGCTGTGCGCAGCCTCTGGGTCCAGCCAGAGCCCTGGCTTCTCGCCACCCACACCCTTCCACCCCTGCTG  
TGGGGCCCTGCCTTTGTGGGGAGCAGCCAGCCCTCTGCCCTGCCAGGGCTCCCCAACTATAGGCCTGGGACCC  
CCGCCCAGCTTGGGGGGCTGCTCGTACGAGTGTAGACACTGGGCCCCATTGGACGTGCTGTTAACTACTATCTTCA  
TTTCCCACTTCCCTCTCTGATTGGGGGTGTATATTTTACATCTTTTTTCTTTTATTTTCGAAGGCTTTGTTT  
TGGTTTCTTAGGTTAAGATGCTCTCGAGCGTTGAGCAGGCACAGCTCTGTGAGGTCCCTGTCCCCACCTGTGG  
TTCTGGCCTCTGAGGTTGGGGGACTACTTGTTCACCCAGGTTCTCCAGGCCAAGTCATGGGGTGATGAGG  
AGTTGGGGCCCTGTCTGTCTAGGCCTGGAGAGTGCCTGTCTGGGAAAAGGTCACTGGACCTGGAAGGGTCCCCA  
GGGTCCCTGACTCCCGTCTCCATCTGTACGTGGTTACCATCATCAGGCACCAGGCGCAAAGTCTTCCGCT  
GTTGGCCATCCCTTCCCCAGCCACAGGTGTCCCTGCCCCAGGACAGTCCAGGGCCAGGGGCTTCTGTGAGAGGC  
AGAGGGGGACCTCACCAAATCTTGGTGAAGAGCCAGGGGCTGGTCCCAGAACAGGCAGTCTCACAAGCACGC  
AGCACACTGGAGTGGACGCTGTGCCACCCGAGCCTGGAGCATGGCCAAGAGCCAGCTTGACACCCACCTGG  
GAGGCCGAGGAGGAGGTCCCTGGGCACAGGGCCTCTTTGGGACTTCAGAGGAAATCTCCAGTCCCACTCTCGG  
AGGGTTAAGAGAAGGCCTCCTGCAGCTGTCCGTCCACACCTCTAGGTGCCAGAGCCCTGCCCCAGCCCCCAG  
CAAGCCTGAGCCCGGAAGAACCAGAGGCCCTCCGAGAGACCCAGTCACACGTCTCTGCTTTAAGCCTTAGCCA  
GCTAGTGACGAGTACAACGAGATAACGCCCATGTGTTTTGAACATTTATGTAAGATTGTCATATGAAATGTATT  
TGGGAACATACATTAACTTTTAACTAAAAA



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**FIGURE 5215**

MADLANEEKPAIAPPVVFQKDKGQKSPAEQKNLSDSGEPRGEAEAPHHGTGHPESAGEHALEPPAPAGASAST  
PPPPAPEAQLPPFPRELAGRSAGGSSPEGGEDSDREDGNYCPPVKRERTSSLTQFFPSQSEERSSSGFRLKPPTLI  
HGQAPSAGLPSQKPKEQQRSVLREPAVLQAPQPKALSQTPSSGTNGVSLPADCTGAVPAASPDTAAWRSPSEAAD  
EEKEPQKNESNASEEEACEKKDPATQQAFFVGQNLDRVKLINESVDEADMENAGHPSADTPTATNYFLQYISS  
SLENSTNSADASSNKFVFGQNMSEVLSPPKLNEVSSDANRENAAAESGSESSSQEATPEKGS LAESAAAYTKAT  
ARKCLLEKVEVITGEEAESNVLMQCKLFVFDKTSQSWVERGRGLRLNDMASTDDGTLQSR LVMRTQGSLRLIL  
NTKLWAQM QIDKASEKSIRITAMDTEDQGVKVF LISASSKDTGQLYAALHHRILALRSRVEQE QEAKMPAPEPGA  
APSNEEDDSDDDDVLAPSGATAAGAGDEGDGQTTGST

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**FIGURE 5216**

TGCGCGTGCGCAGGGATAAGAGAGCGGTCTGGACAGCGCTGGCCGGCGCCGCTGTGGGGACAGCATGAGCGGCG  
GTTGGATGGCGCAGGTTGGAGCGTGGCGAACAGGGGCTCTGGGCCTGGCGCTGCTGCTGCTGCTCGGCCTCGGAC  
TAGGCCTGGAGGCCCGCGAGCCCGCTTTCCACCCGACCTCTGCCCAGGCCGCAGGCCCCAGCTCAGGCTCGT  
GCCCACCCACCAAGTTCCAGTGCCGCACCAAGTGGCTTATGCGTGGCCCTCACCTGGCGCTGCGACAGGGACTTGG  
ACTGCAGCGATGGCAGCGATGAGGAGGAGTGCAGGATTGAGCCATGTACCCAGAAAGGGCAATGCCACCCGCCCC  
CTGGCCTCCCCTGCCCCCTGCACCGCGCTCAGTGAAGTCTGCTGCTGGGGAACTGACAAGAACTGCGCAACTGCAGCC  
GCCTGGCCTGCCTAGCAGGCGAGCTCCGTTGCACGCTGAGCGATGACTGCATTCCACTCACGTGGCGCTGCGACG  
GCCACCCAGACTGTCCCGACTCCAGCGACGAGCTCGGCTGTGGAACCAATGAGATCCTCCCGGAAGGGGATGCCA  
CAACCATGGGGCCCCCTGTGACCCTGGAGAGTGTACCTCTCTCAGGAATGCCACAACCATGGGGCCCCCTGTGA  
CCCTGGAGAGTGTCCCCTCTGTGCGGAATGCCACATCCTCCTCTGCCGGAGACCAGTCTGGAAGCCCAACTGCCT  
ATGGGGTTATTGCAGCTGCTGCGGTGCTCAGTGAAGCCTGGTACCGCCACCCTCCTCCTTTTGTCTGGCTCC  
GAGCCCAGGAGCGCCTCCGCCCACTGGGGTTACTGGTGGCCATGAAGGAGTCCCTGCTGCTGTCAGAACAGAAGA  
CCTCGCTGCCCTAGAGGACAAGCACTTGCCACCACCGTCACTCAGCCCTGGGCGTAGCCGGACAGGAGGAGAGCAG  
TGATGCGGATGGGTACCCGGGCACACCAGCCCTCAGAGACCTGAGCTCTTCTGGCCACGTGGAACCTCGAACCCG  
AGCTCCTGCAGAAGTGGCCCTGGAGATTGAGGGTCCCTGGACACTCCCTATGGAGATCCGGGGAGCTAGGATGGG  
GAACCTGCCACAGCCAGAAGTGAAGGGCTGGCCCCAGGCAGCTCCCAGGGGGTAGAACGGCCCTGTGCTTAAGAC  
ACTCCTGCTGCCCCGTCTGAGGGTGGCGATTAAAGTTGCT

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**FIGURE 5217**

MSGGWMAQVGAWRTGALGLALLLLLGLGLGLEAAASPLSTPTSAQAAGPSSGSCPPTKFQCRTSGLCVPLTWRC  
RDLCSDGSDEEEECRIEPTQKGQCPPPPGLPCPCTGVSDCSGGTDKKLRNCSRLACLAGELRCTLSDDCIPLTW  
RCDGHEDCPDSSDELGCGTNEILPEGDATTMGPPVTLESVTSLRNATTMGPPVTLESVPSVGNATSSSAGDQSGS  
PTAYGVIAAAAVLSASLVTATLLLLSWLRAQERLRPLGLLVAMKESLLLSEQKTSLP

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**FIGURE 5218A**

CCTCGCTCAAGGAGCACCCCGGGGCACCTCCTGTCCGATGGCAGCCCGGCCCTGTCCAGGAATGTCGGTATGA  
CGGTCTCTCAGAAAGGGGGTCCCCAGCCAACACCGAGCCCGGTGGCCCTGGGACGCAACTCGGACCAATCACAG  
GAGAGATGGATGAAGCCGATTCTGCGTTTTTAAATTTAAGCAGACAGCTGATGACTCTCTGTCCCTTACATCTC  
CAAACACCGAGTCCATTTTTGTAGAAGATCCCTACACCGCCTCGCTGAGGAGTGAGATTGAGTCAGACGGCCACG  
AGTTTGAAGCTGAGTCTGGAGCCTCGCCGTGGATGCAGCCTACGCCAAGAAGCAAAAGAGGGAGGTGGTGA  
GACAAGATGTCTTTATGAGCTGATGCAGACAGAGGTGCACCACGTGCGGACGCTCAAGATCATGCTGAAGGTGT  
ACTCCAGGGCCCTGCAGGAGGAGCTGCAGTTTCAGCAGCAAGGCCATTGGCCGCTCTTCCCATGCGCTGACGACC  
TGCTGGAGACGCACAGCCACTTCCTCGCTCGGCTCAAGGAGCGCGCCAGGAGTCCCTGGAGGAGGGCAGTGACC  
GGAATTATGTATCCAGAAAATCGGCGACCTCCTGGTTTCAGCAGTTTTTCAGGTGAAAATGGGGAGAGAATGAAAG  
AAAAGTACGGTGTGTTTTGTAGTGGCCACAATGAAGCTGTTAGTCAATTACAAGTTGCTGCTTCAGCAAAACAAGA  
AATTTCAAAACTTGATCAAGAAAATTGGCAACTTCTCCATCGTGCGGCGGCTTGGCGTGCAGGAGTGCAATTCTCC  
TGGTTACACAACGCATAACCAATAACCCAGTGCTGGTGGAGCGCATATCCAGAACACGGAAGCTGGCACTGAGG  
ACTATGAAGACCTGACCCAGGCCTTGAACCTCATCAAGATATCATCTCACAAGTGAGCGCAAGGTGAGTGAGT  
GTGAGAAGGGCCAGCGCCTCAGGGAGATCGCAGGGAAGATGGACCTGAAGTCTTCCAGCAACTCAAGAACGGGC  
TCACCTTCGCAAGGAAGACATGCTTCAGCGGCAGCTCCACCTGGAGGGCATGCTATGCTGGAAGACCACATCAG  
GGCGCTTGAAAGATATCCTGGCTATCCTGCTGACCGACGTACTTTTGCTGCTACAAGAAAAGATCAGAAATACG  
TCTTTGCTTCTGTGGACTCAAAGCCACCCGTCATCTCGTTACAAAAGCTCATCGTGAGGGAAGTGGCCAACGAGG  
AGAAAGCGATGTTTTCTGATCAGCGCCTCCTTGCAAGGGCCGGAGATGTATGAAATCTACACGAGCTCCAAAGAGG  
ACAGGAACGCCTGGATGGCCACATCCAAAGGGCTGTGGAGAGCTGCCCTGACGAGGAGGAGGGGCCCTTCAGCC  
TGCCCCGAAGAGGAAAGGAAGGTGGTTCGAGGCGCCGCGCCACGAGACTCCGGGACTTTCAAGAGCGGTTGAGCATGA  
AAGACCAGCTGATCGCACAGACCTCCTAGAGAAACAGCAGATCTACCTGGAGATGGCCGAGATGGGCGGCCTCG  
AAGACCTGCCCCAGCCCCGAGGCCTATTCCGTGGAGGGGACCCATCCGAGACCTGCAGGGGGAGCTAATTCTCA  
AGTCGGCCATGAGCGAGATCGAGGGCATCCAGAGCCTGATCTGCAGGCAGCTGGGCAGCGCCAACGGCCAGGCGG  
AAGACGGAGGCAGCTCCACAGGCCCGCCAGGAGGGCTGAGACCTTCGCGGGCTACGACTGCACAAACAGCCCCA  
CCAAGAATGGCAGTTTTCAAGAAGAAAGTCAGCAGCACTGACCCAGGCCCGGAGACTGGCGAGGCCCCCAACA  
GCCCCGACTTGAAGCTCAGTGACAGTGACATTCTGGGAGCTCTGAGGAATCGCCGAGGTGGTGGAGGCGCCAG  
GCACGGAATCCGATCCCGCTGCCCCACCGTCTGGAGTCGGAGCTTGTCAGCGGATCCAGACACTGTCCAGC  
TGCTCCTGAACCTTCAGGCGTAATCGCCACCAGGACAGTATGTGGAGACGCAGCGGGCTGCCATCCAGGAGC  
GGGAGAAGCAGTTCCGGCTGCAGTCGACCGTGGGAACCTGCTGCTGGAGCAGGAGCGGCAACGCAACTTCGAGA  
AGCAGCGGGAGGAGCGCGCGGCCCTGGAGAAGCTGCAGAGCCAGCTGCGGCACGAGCAGCAGCGCTGGGAGCGCG  
AGCGCCAGTGGCAGCACCAGGAGCTGGAGCGTGGGGCGCGCGGCTGCAGGAGCGGAGGGCGAGCGCGGCAGC  
TACGCGAGCGGCTGGAGCAGGAGCGGGCCGAGCTGGAGCGCCAGCGCCAGGCCTACCAGCAGACCTGGAGCGGC  
TGCGCGAGGCCCCAGCGTCCGTGGAGCGCAGCGGGAGCGCTGGAGCTGCTGCGCCGCTCAAGAAGCAGAACA  
CCGCGCCAGGCGCGCTGCCGCCCCGACACACTGGCCGAGGCCAGCCCCAAGCCACCCTCCCAGCTTCAACGGGG  
AAGGGCTGGAGGGCCCTCGTGTGAGCATGCTGCCATCCGGCGTGGGGCCAGAGTACGCAGAGCGCCCCGAGGTGG  
CTCGCGGGACAGCGCCCCACCGAGAACC GGCTGGCCAAGAGCGATGTGCCATCCAGCTGCTCAGCGCCACCA  
ACCAGTTCAGAGGCAGGCGGCCGTGCAGCAGCAGATCCCCACCAAGCTGGCGGCCCTCCACCAAGGGTGGCAAGG  
ACAAGGGCGGCAAGAGCAGGGGCTCTCAGCGCTGGGAGAGCTCAGCGTCTTCGACCTGAAGCAGCAGCTGCTGC  
TCAACAAGCTCATGGGGAAAGATGAGAGCACCTCACGGAACCGCGCTCGCTGAGCCCTATCCTGCCCGGCAGAC  
ACAGTCTGCGCCCCCACCAGACCTGGCTTCCCCGCCCCGAGCCACCGCCAGCTGACAGCCCCCTCCGAGGGCT  
TCTCTCTCAAGGCCGGGGGCACAGCCCTCTGCCCGGGCCCCAGCTCCCTCGCCACTGCCGGCCACACCACTCA  
GCGCCAAGGAGGACGCCAGCAAAGAAGACGTATCTTCTTAAAAGGGCCGTGACTCAAGGAAAGTTTTTAATG  
GAAAGTTGAGCCAGAATAAACCAGGGAGCTGTCTGAAATCATAGCACCCCATCCGGGTGGCGGGGAGATCAACT  
CCGAGCTGTTTTTCCGAGGCAGTGAGGAACGGTGCCGGCTCTGCACGGAGCTGAGGACAGGACAGACCTTGCTTT  
GAGAAGGAGCTGCCGGCGGGGCCACGCTCCACAGCCGCCGCGACAGTGGAGCCAAGGGTTAGGGCACCAGGA  
GGGGCCAGGTGGCGTGGCAGCATCTGTCCCAGAATCAGGAGAATCCACTTCCCAAACAGAGCCCCACGCAGG  
TTCACCATGAACCTCAGGGTCAGGGAATGAGCCAGGCACGGGGCATGGGCAGAGAGGGCCACGGGGCAGGGCCC  
ACTGAGGGAACATCAGTGGCCCTCAGTCAGTTCTGTGGTTTGAAGCCCATCGTGAAAGGGGCTGACCTTTG

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**FIGURE 5218B**

CCCCCTTTTACTTGGCATTGGTTTTTGAAACCAGCTGTTTCCCAAACCTCTGCTTCCCAAGGGCAACCGTTGCTGTT  
CACACGCTCAGCCTGTCTGGGGGAGCGGGCCTCTAGCTTCAGCCAGGGCGGGTACACACCCCTGGGCACAGGGTCC  
TCAGCCCCCGGAAATGAGCTCCCAGGGCTGGCGTCCCACCTTCCAGGTGGGGGCTGGCACATCACAGACTGTCCG  
AGAGCGCCATGTCCCAGGGCATGCAGAGGATGCACCTAGAGACGTTGCAGCAAGTGGACAAGTGGCCGCTGTGCCG  
GGCCCCCTCGCTTGTAGTGAGCTGTTGCAGCTTACGGTCCGTTCCCTGGAGGGGTGGAGGAAGGAGGTGTTGGGCA  
GCATCAAAGGTGCTGGGACATCCCAGGGTGGTGAGATCCATCCACGATCCAGCTCCGGTGGAGAAAGGGCCCATG  
TCAAGCCTTGTTCTGCACCCCAAGCATTGGTGGTAGGACTGGGTCTGGCTGATCGTCCTTGTTCACAGTGGGGT  
ACATGTGAGCCCCTGCCAGGGCCAAGTCCTTCTCCCGAACCCAGGGTCTGGGAACTGCAGATCCCGGGGGGATT  
CAGCCCTTCTCCCACTGTGCTGGCAGAGGCACTCCTGTGACGCTGAATACAGTGAACAGGGACATTCCCGCCACT  
CGGGGACAGATGGGCACAAGGGAGGGGAACTCCATCAGGAAGTGCTCCCTGGGCAGAGGCGCCCACTGGGTGC  
TGTGGGCTCAGGAGGGGCGGGGCAGGAGCTGGTGCCAACCGGGAACAGAGCCCCACAGCCATACAGCCATTG  
GTGACAAGGTCCTGAGAACACAGTGGCCAGGTGTCCCCAGGCTCCTGGCCCCCTCCGACGACCTCAACTCTGCCCCA  
GCCCCGTCCCTGGCCATCAGCGACGCTGTCCGCCCCCGTCAGATCCCATGTGTGCCATGTTTATCATCAGTGT  
TTGTATTTTGTACTGAGTATCGGAGCACTTTACAGAAGCTGACTGTACATTCTGTTCTGTTGTGAAGAGAACA  
TTCCCAGACCCTGGCACCCCTCCTGAGCCGCGTGTGCCGGTCCAGCCCTCCGAGATGCCACAATTCCTTGATGG  
GGGAGAAGTTCAAGGAATTTCTGCTCGGCCACGCGGTGGGAACCCCGCTCCCGCCATGTGGCAGAGGGGTCTC  
AGTCGTGCTAGGCATCGGGCGGCAGCGCCGACAGCCCTTCCTCGCCAGTGGCCCTCGGCCACTCCTGGGTTGGA  
GCCCCGATTTTATTTGTAAAGTTGACAGTCGAGCAAATGTTCTATTTTCGTGGGATCTGCACACGTCCTTGTGTCAG  
TTGTGGTCATGATCTTAGTCACCTGCTAATTATTTTACAATGATTACAACATTCCTCACTGCGGGATATTTCT  
GACCCGCTTTAGAACTTAAGACCTGATTCTAGCAATAAACGTGTCCGAGATG

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**FIGURE 5219**

TCTCCTGTACCTGGGCATCCAGAAAAATGGTGGTGTATGGCGGACTCTCGCGGCCCGAGCGGCCGGACCTTGTCT  
TCGAGGAAGAGGACCTCCCTATGAGGAGGAAATCATGCGGAACCAATTCTCTGTCAAATGCTGGCTTCGCTACA  
TCGAGTTCAAACAGGGCGCCCCGAAGCCCAGGCTCAATCAGCTATACGAGCGGGCACTCAAGCTGCTGCCCTGCA  
GCTACAAACTCTGGTACCGATACCTGAAGGCGCGTCGCGGCACAGGTGAAGCATCGCTGTGTGACCAGCCCTGCCT  
ATGAAGATGTCAACAACCTGTCATGAGAGGGCCTTTGTGTTTCATGCACAAGATGCCTCGTCTGTGGCTAGATTACT  
GCCAGTTCCTCATGGACCAGGGGCGCGTCACACACACCCGCCGCACCTTCGACCGTGCCCTCCGGGCACTGCCCA  
TCACGAGCACTCTCGAATTTGGCCCTGTATCTGCGCTTCCTGCGCTCACACCCACTGCCTGAGACAGCTGTGC  
GAGGCTATCGGCGCTTCCTCAAGCTGAGTCTTGAGAGTGCAGAGGAGTACATTGAGTACCTCAAGTCAAGTGACC  
GGCTGGATGAGGCCGCCCGCGCCTGGCCACCGTGGTGAACGACGAGCGTTTCGTGTCTAAGGCCGGCAAGTCCA  
ACTACCAGCTGTGGCACGAGCTGTGCGACCTCATCTCCAGAAATCCGGACAAGGTACAGTCCCTCAATGTGGACG  
CCATCATCCGCGGGGGCCTCACCCGCTTCACCGACCAGCTGGGCAAGCTCTGGTGTCTCTCGCCGACTACTACA  
TCCGCAGCGGCCATTTTCGAGAAGGCTCGGGACGTGTACGAGGAGGCCATCCGGACAGTGATGACCGTGCGGGACT  
TCACACAGCTGTTTTGACAGTACGCCCAGTTCGAGGAGAGCATGATCGCTGCAAAGATGGAGACCGCCTCGGAGC  
TGGGGCGCGAGGAGGAGGATGATGTGGACCTGGAGCTGCGCCTGGCCCGCTTCGAGCAGCTCATCAGCCGGCGGC  
CCCTGCTCCTCAACAGCGTCTTGCTGCGCCAAACCCACACCAGTGCACGAGTGGCACAAGCGTGTGCGCCCTGC  
ACCAGGGCCGCCCGGGAGATCATCAACACCTACACAGAGGCTGTGCAGACGGTGGACCCCTTCAAGGCCACAG  
GCAAGCCCCACACTCTGTGGTGGCGTTTGCCAAAGTTTTATGAGGACAACGGACAGCTGGACGATGCCCCGTGTCA  
TCTTGAGAGAGGCCACCAAGTGAACTTCAAGCAGGTGGATGACCTGGCAAGCGTGTGGTGTAGTGCGGAGAGC  
TGGAGCTCCGACACGAGAACTACGATGAGGCCTTGCGGCTGTGCGAAAGGCCACGGCGCTGCCTGCCCCCGGG  
CCGAGTACTTTGATGGTTCAGAGCCCGTGCAGAACCGCGTGTACAAGTCACTGAAGGTCTGGTCCATGCTCGCCG  
ACCTGGAGGAGAGCCTCGGCACCTTCCAGTCCACCAAGGCCGTGTACGACCGCATCCTGGACCTGCGTATCGCAA  
CACCCAGATCGTCATCAACTATGCCATGTTCTGGAGGAGCACAAGTACTTCGAGGAGAGCTTCAAGGCGTACG  
AGCGCGGCATCTCGCTGTTCAAGTGGCCCAACGTGTCCGACATCTGGAGCACCTACCTGACCAAATTCATTGCC  
GCTATGGGGCGCCGAAGCTGGAGCGGGCACGGGACCTGTTGAACAGGCTCTGGACGGCTGCCCCCAAATATG  
CCAAGACCTTGATCTGTGTACGCACAGCTGGAGGAGGAGTGGGGCCTGGCCCGCATGCCATGGCCGTGTACG  
AGCGTGCCACCAGGGCCGTGGAGCCCGCCAGCAGTATGACATGTTCAACATCTACATCAAGCGGGCGGCCGAGA  
TCTATGGGGTCACCCACACCCGCGGCATCTACCAGAAGGCCATTGAGGTGCTGTGCGACGAGCACGCGCGTGAGA  
TGTGCTGCGGTTTGACAGATGGAGTGCAAGCTCGGGGAGATTGACCGCGCCCGGGCCATCTACAGCTTCTGCT  
CCCAGATCTGTGACCCCGGACGACCGGCGCTTCTGGCAGACGTGGAAGGACTTTGAGGTCCGGCATGGCAATG  
AGGACACCATCAAGGAAATGCTGCGTATCCGGCGCAGCGTGCAGGCCACGTACAACACGCAGGTCAACTTCATGG  
CCTGCGAGATGCTCAAGGTCTCGGGCAGTGCCACGGGCACCGTGTCTGACCTGGCCCTGGGCAGAGTGGCATGG  
ACGACATGAAGCTGCTGGAACAGCGGGCAGAGCAGCTGGCGGCTGAGGCGGAGCGTGACCAGCCCTTGCGCGCCC  
AGAGCAAGATCCTGTTCTGTGAGGAGTGACGCTCCCGGGAGGAGCTGGCAGAGCTGGCACAGCAGGTCAACCCCG  
AGGAGATCCAGCTGGGCGAGGACGAGGACGAGATGGACCTGGAGCCCAACGAGGTTCGGCTGGAGCAGC  
AGAGCGTGCCAGCCGAGTGTGTTGGGAGCCTGAAGGAAGACTGACCCCGTCCCTCCCCATCCCCCTCCCCACCC  
CCTCCCCAATACAGCTACGTTTGTACATC

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**FIGURE 5220**

MVVMARLSRPERPDLVFEEEDLPYEEEIMRNQFSVKCWLRYIEFKQGAPKPRLNQLYERALKLLPCSYKLWYRYL  
KARRAQVKHRCVTDPAYEDVNNCHERAFVFMHKMPRLWLDYCQFLMDQGRVTHTRRTFDRLRALPITQHSRIWP  
LYLRFLRSHPLPETAVRGYRRFLKLSPEAEYIEYLKSSDRLEAAQRLATVVNDERFVSKAGKSNYQLWHEL  
DLISQNPDKVQSLNVDAIIRGGLTRFTDQLGKLWCSLADYYIRSGHFEKARDVYEEAIRTVMTVRDFTQVFD  
SYAQFEESMIAAKMETASELGREEEDDVLRLARFEQLISRRPLLLNSVLLRQNP HHVHEWHKRV ALHQGRPREII  
NTYTEAVQTVDPFKATGKPHTLWVAFKFYEDNGQLDDARVILEKATKVNFKQVDDLASVWCQCCELELRHENYD  
EALRLLRKATALPARRAEYFDGSEPVQNRVYKSLKVSMLADLEESLGTQSTKAVYDRILDRLRIATPQIVINYA  
MFLEEHKYFEESFKAYERGISLFKWPVSDIWTSTYLTKF IARYGGRKLERARDLFEQALDGCPPKYAKTLYLLYA  
QLEEEWGLARHAMAVYERATRAVEPAQQYDMFNIYIKRAAEIYGVTHTRGIYQKAIEVLSDEHAREMCLRFADME  
CKLGEIDRARAIYSFCSQICDPRTTGAFWQTWKDFEVRHGNEDTIKEMLRIRRSVQATYNTQVNFMASQMLKVS  
G SATGTVSDLAPGQSGMDDMKLLEQRAEQLAAEAERDQPLRAQSKILFVRSDASREELAE LAQQVNPEEIQLG  
EDEDEMDLEPNEVRLEQQSVPAAVFGSLKED

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**FIGURE 5221**

ATGGGGCTGAGTCCAGATGCCCCAGAGGACGAGGCTGGCATCAAGAAGGCAGCAGAGAACATCAAGGCCTTGATT  
GAGCATGAAATGAAGAACGGGATCCCTGCCAATCGAATCGTCCTGGGAGGCTTTTCAAGGGCGGGGCCCTGTCC  
CTCTACACGGCCCTCACCTGCCCCACCCGCTGGCTGGTATCGTAGCATCGAGCTGCTGGCTGCCTCTGCACCGG  
GCCTTCCCCCAGGCAGCTAAAGGCAGTGGCAAGGGCCTGACCATCCTCCAGTGCCATGGGGAGCTGGACCCCATG  
GTGCGCGTACGGTTTGGGACCCCTGACGGCTGTTGTACACCTGCCAGGGTCCAGTTCAAGACATACTCGGGTGTC  
ATGCACAGCTGCTGTCTCAGGAGATGGCAGCTGTGAAGGAATTTCTTGAGAAGTTGCTGCCTTCTGTCTAACT  
AGTCGCTGGCCCCAGTGCGCCTCCAGGCCCCCAGCCTCTGGGAGAGGGGAGAGAGCTCCTCCTGCCAAGAACACC  
AGCCCAGGCCCTGTTTCTAGCCCAGGGCGTGCCAGCGGGACCACCAGACACTTCCGGGCCTACCCCAGGAACCCC  
GTCCCCGGCCATGGCCCGTCGGTCCCGGGCTGCGGGCACCAGGTGGGGCTCCCCGGCCAGCTCCGAGTGCCCG  
GCCACGGCCCCGACAGAGGGCCCCCGAAATCAGTGAGCAGCGCCTCGGAGCACAGTACCACCGAGCCAAGCCC  
GGCTGCCAGGAGGCGCCAGCGCCGCGCTTCTGGGCCCTCAGCCCGCGGAACACCCAGGGCTCCTGCGCATCC  
CTCGCAGCCCCAAGCCGAAAGGACTGCAGGCTCTGCGACCCCTCAGGTCACACCCCCAAGGAAGGACGCAGCCCC  
AGCACTAGGACCGCTTTCTCCTCTCCTTTGGCCACACCTCTCCATCGGGTACCAAGGCAAGACCCGTACCGCC  
TCCCGACAATGCAGCCACTCCCCTGCCAGCCACGCTCCCTCCCTCTCCACCGCCACGCCCCCTCGCAAGTTCCA  
CCCACACAGCTGATTATGTCCTTTCCAGAAGCAGGCGTCTCTTCCCTGGCCACAGCCGCTTTTGTGGCTTCAGTC  
TCTCCATCAGTTTTCATCCCCTCTGCAGAGACTCTCCTCTTCTGGCCACATTGCCTCTGCAGGCCTCTCCCTCTCC  
TTTGACCACAGTCTCTCTGCAGGATCCTCCTCTAGTTTCTCCCTCTCTTTTGGCCTCACCGCCTCTGCAGGCTCC  
GCCCCACCCACAGGCCCCACCTTCTATGACTACGCCCCCTATGCAGGCCCCGCCCTCTCTCCAGACCATTCCCCC  
AATACAGGTCCCACATTCTCTGACCTACCGTCTCTGCAGGCACCTCCCTCTCCTCTGGCTTTGTCTCTCTGCA  
GGCCACAACCTCTTTGGGCTCACCCACTCTGCAGGCCACACATTCTTTCTGACAATGTCCCCTAG



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**FIGURE 5222**

GTCGCCCTCTGTCCCTGCTCTACCTCTCTGTCCCTGTCTGGCTCTCCCGTCACCCCTCCCTGCCTCTGTCTCTCT  
TCTGGCCTGAGCCTGGGCCCAGCCACCTCCTGACCGGAGGGAATCGGTGACGGAGCGGGGCCAAGGGAGGGGTCC  
GGAGGGAGTCAGGGATGGAGGGCAGAGGGAGTGGATGTGGGGGTTTGGAGACGTGTGACAAGCTCCAGCAGGGGT  
GGGGGCCGGGCTGAGGGTGGGGGTGCGAGGTGGTCACTCCCATCGTGCCCTGGCCGTCCCTCCACTCACCACA  
CCTGGCCCAGTCCACGTTGAGGTCCAGGACTGGGAAGGACCGGGTGAGTGCACCGGGGACCCAGGCCAGGTGCCC  
CCCGGAGCCTGCTGGGGTGGCCAGAGCAGGAGGGGGTGTGTTTCCTTTTTGTGGGTGTTGCATGCAAAATCAAGTG  
GACAAGAAAAATAACAAAACAAAAACAAGAAAAAAAAAACACAAAACCCCGTAAATCACAAAGAAAATCCAA  
CACCAAAGGCGCAGAAGCCGGCTGGCCGTGGTGGGGGCAGCGTAGGCGTAGCATCCCTCTCCTCTCACTTAGCCT  
GTTGACTCTTGTTATTATCATGATATTCACAAAACGCCGCATGTTAAAAAGTCATAGATGTCATCTTCTCTCTG  
CCCCAGGGAGGAAAGCCA<sup>1</sup>CCTTCTCTTGCCCTTGCCCTTTGTGAGGGGCCAGGGGTCTGCCGGGTGGGGGT  
GCCAACAGGCCTGGCCCTTTCCTCCCCTGCATCCAGCCATGGGGGCCTCTGCGATTGCCGGAAGGTTGCATGGCT  
GGTCCCAGGGCCAGCACAGGCCCGAGGCCGGGCTGCCTGGTTTTATTTTTATTAACTTTATTTTCTGTTTTATG  
AGTGTGTGTCCGCCCCACCCCA<sup>2</sup>CCCTTCAGTGTTAAGTGGGGAGCCCTGGGGGAGTCTCTCCTGCCTCCCAGC  
CTCTCCCAAGACCTCCCCCTCGTCACCAGCCATCCCTCTGGACCAGGCAGAGGGCGGACCGGGTGGGCAGGGGC  
CTGAGGGTGGCTCGGGCCAGCCCACCAGCCAATGGACCCCTCCTCAGGCCGCCAGTGTGCCCCTGCCCTTTTTA  
AAACAAAATGCCCTCGTTTGTAAACCCTTAGACGCTTGAGAATAAACCCCTTCCTTTTCTTCC

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**FIGURE 5223**

CGCCGCGAGAAGGTCACACGATTCTCCAACATGGCGGCGGGCCCTGCGGAGTGGCTGGTGCCGCTGTCCACGG  
AGATGCCTCGGCAGTGGAATCCAATTTCTTTCCAGCCACAACCTACCCCATGGGTCGACCTATCAGATGCGCCGG  
CCGGGCGGAGAGCTGCCACTGTCCAAATCATATTCTTCTGGAACAGAAAAGGCTTTCTGTCCGGCTTGCTAGAT  
AATGTCAAACAAGAATTAGCCAAAAACAAGAAATGAAAGAAAGTATAAAAAAATTCCGTGACGAGGCCAGAAGG  
CTAGAAGAATCAGACGTGCTCCAGGAGGCCAGAAGGAAATACAAAACCATCGAGTCAGAAACCGTGCGGACGAGC  
GAGGTGCTACGGAAGAAGCTTGGGGAGCTGACGGGCACCGTGAAGGAGAGCCTTCACGAAGTCAGTAAAAGTGAT  
CTCGGCCCGAAAATCAAGGAGGGCGTGAGGAAGCAGCCAAGACGGCCAAGCAGTCGGCCGAGTCGGTATCCAAA  
GGCGGGGAGAAGCTGGGCAGGACAGCGGCCTTCAGAGCCCTCTCCCAGGGGGTGAGTCCGTGAAGAAGGAAATT  
GACGACAGCGTCTTGGGACAGACCGGGCCCTACCGGAGGCCCCAGCGACTCCGGAAGAGAACGGAGTTTGCGGGA  
GATAAGTTCAAGGAGGAGAAAAGTGTGAGCCAAACGAGGAGGCCCTGGGGGTGCTGCTGCACAAGGACTCCAAG  
TGGTACCAGCAGTGGAAGGACTTCAAGGAGAACAACGTGGTGTGTTAACCGGTTCTTCGAGATGAAGATGAAGTAT  
GACGAAAGCGACAACGCGTTCATCCGGGCATCCCGGGCCCTTACGGACAAGGTCACCGACTTGCTGGGGGGCCTG  
TTCTCCAAGACAGAGATGTCCGAGGTGCTCACGGAGATCCTCCGGGTGGACCCGGCCTTTGACAAGGACCGGTTT  
CTGAAACAGTGCGAGAACGACATCATCCCAATGTCTGAGGCCATGATTTCTGGAGAGCTTGACATTCTCAA  
GACTGGTGCTATGAAGCTACTTACAGCCAGCTGGCCCCACCCATCCAGCAGGCCAAGGCACTGGGTCTCCAGTTC  
CATTCTCGCATCCTAGACATTGACAACGTGACCTGGCCATGGGCAAGATGATGGAGCAGGGGCCGGTGCTGATC  
ATCACCTTCCAGGCACAGCTGGTGATGGTGGTCAGGAACCCCAAAGGCGAGGTGGTGGAGGGTGACCCGGACAAG  
GTGCTGCGGATGCTGTACGTGTGGGCGCTCTGCCGAGACCAGGACGAGCTCAACCCCTACGCGGCCTGGCGGCTC  
CTGGACATCTCGGCCTCCAGCACCGAGCAGATTCTCTGAGTGTGGTGCCGAGCCAGGTAGCCCCGGCCTGGGTG  
ATCAGGCACAGAGGCACCGCAACACCACCTGCGGCAACT

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**FIGURE 5224**

MAAAALRSGWCRCPRRCLGSGIQFLSSHNLPHGSTYQMRP GGELPLSKSYSSGNRKGFLSGLLDNVKQELAKNK  
EMKESIKKFRDEARRLEESDVLQEARRKYKTIESETVRTSEVLRKKLGELTGTVKESLHEVSKSDLGRKIKEGVE  
EAAKTAKQSAESVSKGGEKLGRTAAFRALSQGVESVKKEIDDSVLGQTGPYRRPQRLRKRTFAGDKFKEEKVFE  
PNEEALGVVLHKDSKWYQQWKDFKENNVVFNRRFFEMKMKYDESDNAFIRASRALTDKVTDLLGGLFSKTEMSEVL  
TEILRVDPAFDKDRFLKQCENDIIPNVLEAMISGELDILKDWCEATYSQLAHP IQQAKALGLQFHSRILDIDNV  
DLAMGKMMEQGPVLIITFQAQLVMVVRNPKGEVVEGDPDKVLRMLYVWALCRDQDELNPYAARLLDISASSTEQ  
IL

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**FIGURE 5225**

CGCCGGCTCCGCCCCCGTCGGGTGTTTTGTGGTGGGGCTGCGGAGTCGCCGATCCCGCCGGAAGCGCCAGGACAAT  
GGGGACCCGAGACGACGAGTACGACTACCTATTCAAAGTGGTGCTCATCGGGGACTCAGGCGTGGGCAAGAGCAA  
CCTGCTGTGCGCTTACCCGCAACGAGTTCAACCTGGAGAGCAAGAGCACCATCGGCGTGGAGTTGCGCACCCG  
CAGCATCCAGGTGGACGGCAAGACCATCAAGGCGCAGATCTGGGACACCGCTGGCCAGGAGCGTACCGCGCCAT  
CACCTCCGCTACTACCGTGGTGCAGTGGGCGCCCTGCTGGTGTACGACATCGCCAAGCACCTGACCTATGAGAA  
CGTGGAGCGCTGGCTGAAGGAGCTGCGGGACCACGCAGACAGCAACATCGTCATCATGCTGGTGGGCAACAAGAG  
TGACCTGCGCCACCTGCGGGCTGTGCCCCTGACGAGGCCCCGCGCCTTCGCAGAAAAGAACAACCTTGTCTTCAT  
CGAGACCTCAGCCTTGGATTCCACTAACGTAGAGGAAGCATTCAAGAACATCCTCACAGAGATCTACCGCATCGT  
GTCACAGAAACAGATCGCAGACCGCGCTGCCCACGACGAGTCCCCGGGGAACAACGTGGTGGACATCAGCGTGCC  
GCCCCACCACGGACGGACAGAAGCCCCAACAGCTGCAGTGTGCCAGAACCTGTGACCCCTGCGCCTCCACCCAGC  
GTGCGTGACGCTCTCCGCCCCGCCCCGCCCACGGTATCCTCTGGCCCCCTCCCTGCTGTCCCTCTGTGGCCGGCTC  
GTTCCAGCCCTCCCAGTGAGCTCTGCACGGCCGGGCGGGGCCAGGAAGGACAGGAGCCAGTGTACCCCGTCC  
TGCCCCGGGAAAAGCTAGAAGCCCCGGTTTGTGTCACCCATGAAACTCGGGTCCCCACAGCGTCTTGGCGGGGTG  
GGGAGGGCGGCAGGATGGACGGGGCTGGCCAGAGGCGAGGAGGACGGGCGGACGGCGCCGCTTCTCCCTTTTC  
CTTGGCCGACTCTAGGGAGCGATTGCCTCCCTCCCTCTGTGACCGGGTGGCCCAGCCAGCCCGTCTGTCCCCACCC  
AGAACCCTGCTCTGGGCCAAAGCCCCGAAGAACCAGGCAGCGGGGGCCGGGGCAGGCGGACCCCCCGGGCTCTCAG  
CGCCCACCCGCTCTCCGCACACAGCAGCTCGCACAGGCCCTCCACCTCTGCCTGTTGATTGATGCAGGGAGAAG  
CCCGTCCCCCCTCTCCCTCTCCCTCCCTCTCTGACGCAACGCGCCCTCTCGGCCCTCCCTGTCCCCCTC  
CTCTGTCTCGTCTCCCCATCTGGTCTGGAACCTGTTGCAAGTGAAGCAATATCTCCGTGTTTTGTATATACAAC  
CGCTCTTGTAGCCTTTGGTTTTTGTAAATGTAGAGAAACACAGATTCTTTATACACTTTGTAAGATTTACGCCAA  
ACCCAGCTCTCGATCTCTTCTCTCCCTGTGGCCCCCTGCGCTGTTGCCCGTCCCCGTCACCCGCCCCGTTACT  
GAAATGTATAATCTGACTTCTGTACAGAAACCTGC

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**FIGURE 5226**

CGCGCCGGGAACAGCCAGTCGGTGCCTAACGCGAGTGTATCTCGAGAGAGAAGCGATCAACAGCTGCCGGTCTGC  
GCCTGCGCGCGCGGGGGCGTGGCCCGGGGCGAGTGGGGCCAAGGAGGCAGCCGGGAGCGCGGGGCGCAGGTGTT  
ACTGGTTGCGTCGGGTACAGTGGGCGCGCAGGCGCAGCGCGGTGCAGCCCGTTCGCTCACACAAAGCCCAGACGC  
GGAGAAAATGGCGGCAGGGGTGCAAGCGCGCGCGGAGGTGGCGGCGACGGAGATCAAAATGGAGGAAGAGAGCGG  
CGCGCCCGCGGTGCCGAGCGGCAACGGGGCTCCGGGGCCCTAAGGGTGAAGGAGAACGACCTGCTCAGAATGAGAA  
GAGGAAGGAGAAAAACATAAAAAGAGGAGGCAATCGCTTTGAGCCATATGCCAATCCAACATAAGATACAGAGC  
CTTCATTACAAACATACCTTTTGATGTGAAATGGCAGTCACTTAAAGACCTGGTTAAAGAAAAAGTTGGTGAGGT  
AACATACGTGGAGCTCTTAATGGACGCTGAAGGAAAGTCAAGGCTCTATAGTGTGTTGAATTCAAGATGGAAGA  
GAGCATGAAAAAAGCTGCGGAAGTCCTAAACAAGCATAGTCTGAGCGGAAGACCACTGAAAGTCAAAGAAGATCC  
TGATGGTGAACATGCCAGGAGAGCAATGCAAAAGGCTGGAAGACTTGAAGCACAGTATTTGTAGCAAATCTGGA  
TTATAAAGTTGGCTGGAAGAACTGAAGGAAGTATTTAGTATGGCTGGTGTGGTGGTCCGAGCAGACATTCTTGA  
AGATAAAGATGGA AAAAGTCGTGGAATAGGCACTGTTACTTTTGAACAGTCCATTGAAGCTGTGCAAGCTATATC  
TATGTTCAATGGCCAGCTGCTATTTGATAGACCAATGCACGTCAAGATGGATGAGAGGGCCTTACCAAAGGAGA  
TTTCTTCCCTCCTGAGCGTCCACAACAACCTCCCCATGGCCTTGGTGGTATTGGCATGGGGTTAGGACCAGGAGG  
GCAACCCATTGATGCCAATCACCTGAATAAAGGCATCGAATGGGAAACATAGGTCCCGCAGGAATGGGAATGGA  
AGGCATAGGATTTGGAATAAATAAAATGGGAGGAATGGAGGGGCCCTTTGGTGGTGGTATGGA AAACATGGGTCTG  
ATTTGGATCTGGGATGAACATGGGCAGGATAAATGAAATCCTAAGTAATGCACTGAAGAGAGGAGAGATCATTGC  
AAAGCAGGGAGGAGGTGGAGTGGAGGAAGCGTCCCTGGGATCGAGAGGATGGGTCTGGCATTGACCGCTCGG  
GGGTGCCGCGCATGGAGCGCATGGGCGCGGGCTGGGCCACGGCATGGATCGCGTGGGCTCCGAGATCGAGCGCAT  
GGGCCTGGTCATGGACCGCATGGGCTCCGTGGAGCGCATGGGCTCCGGCATTGAGCGCATGGGCCCGCTGGGCCT  
CGACCACATGGCCTCCAGCATTGAGCGCATGGGCCAGACCATGGAGCGCATGGCTCTGGCGTGGAGCGCATGGG  
TGCCGGCATGGGCTTCGGCCTTGAAGCGCATGGCCGCTCCCATCGACCGTGTGGGCCAGACCATTGAGCGCATGGG  
CTCTGGCGTGGAGCGCATGGGCCCTGCCATCGAGCGCATGGGCTGAGCATGGAGCGCATGGTGGCCGAGGTAT  
GGGAGCTGGCCTGGAGCGCATGGGCCCGTGTATGGATCGCATGGCCACCGGCCTGGAGCGCATGGGCGCCAACAA  
TCTGGAGCGGATGGGCCTGGAGCGCATGGGCGCCAACAGCCTCGAGCGCATGGGCCTGGAGCGCATGGGTGCCAA  
CAGCCTCGAGCGCATGGGCCCGCCATGGGCCCGGCCCTGGGCGCTGGCATTGAGCGCATGGGCCTGGCCATGGG  
TGGCGGTGGCGGTGCCAGCTTTGACCGTGCCATCGAGATGGAGCGTGGCAACTTCGGAGGAAGCTTCGCAGGTTT  
CTTTGGTGGAGCTGGAGGCCATGCTCCTGGGGTGGCCAGGAAGGCCTGCCAGATATTTGTGAGAAATCTGCCATT  
CGATTTACATGGAAGATGCTAAAGGACAAATTAACGAGTGCGCCACGTGCTGTACGCCGACATCAAGATGGA  
GAATGGGAAGTCCAAGGGGTGTGGTGTGGTTAAGTTGAGTCCGAGAGGTGGCCGAGAGAGCTGCCGGATGAT  
GAATGGCATGAAGCTGAGTGGCCGAGAGATTGACGTTTCAATTGATAGAAACGCTTAAGCAGTTGCCTTTTTTAA  
ACATCGATACGAGACCTCTGAATTTGTATTTTTCTTGTTAACCATTTTAATTTGTTGGCTGGATGTATAAAGAT  
GTTTAAAAAATTCAGTTGCTTTTTGGGGTAATTTGAATTACTTTTTAATGACTGGGGTTCCATTTGACTGTTTG  
CATTGAGATTGCAATGTGCGCAATTTTTTTGTAGTTGTGGCATCTTGTTGACATCGAATATGACTTTGATAATA  
AATACCGGTTCTCTG

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**FIGURE 5227A**

AGTGAAGCGGAAGCCATTACTCTCTGGAGTCGATTGCCCGAGACACATGGGCCAAGGAGGGGTGACGGCGGAAT  
TCTTTTCGGCCTGTTGGGGACCCCTCGTGTCCCCACGCCAGACTGGACCTCCCGTATGAACTTCTCTCGCATCGG  
CGGGCGGTTCCGTCACCTCCGCTCCCCCGATCCTATTCCAGTCGTATGCCAGCTTGGAGAGTCACGTGAGAGCA  
AGAGAGTAGCTTTCTGGTTGCTGCTGGTGCCCTGCTCAGGCAAAGTACTGCCATTCTCTGAGGATGGCAGCTCTG  
TCCCCACATTTGCCACGTCCACCCAGGATTCCACCTGTCTCCAGGACTCAGAATTTCTGTTTCTCAAAAGAC  
CATTCTGTCCCCAGAATTTGGACCTGTTCTGTGTGTCAGTGGTCTGGAGCCTCACACCCAGTGTGGTTCCAG  
GAATCGGTGACTTTCCAAGATGTCTGTGGACTTTACCGAGAAGGAGTGGCCCTTGCTGGATTCTCTCAGAGA  
AAACTGTACAAAGATGTAATGCTGGAGAAGTACAGCAACCTCACTTCACTGGGGTATCAGGTGGCAAACCCAGC  
CTCATCTCACACTTGGAGCAGGAGGAGGAGCCGAGGACAGAGGAGAGGGGCGCTCACCAGGGCGCTGTGTCAGAT  
TGGGAGACTCCATCTAAAACCAAGTGGTCACTTCTTATGGAAGATATTTTGGGAAGGAAACGCCAGTGGTGTG  
ACGATGGAAGAGCCGGTCTTGGAGAGAAGTCCACTGAATACGCTCACTTGTTCGAAGTCTTTGGCATGGACCT  
CATCTCACTCAGCCAATGGGAAGGCACGCTGGCAAGAGGCCCTATCACCGCCGCGACTATGGGGTAGCGTTCAAG  
GGCAGGCCGCGACCTCACTCAGCACATGAGCATGTACGACGGGAGAAAAATGCATGAATGTCATCAGTGCCAAAAA  
GCCTTACCACGAGCGCGTCCCTCACACGGCACAGGAGAATCCACCGGGGAGAAAGCCTTACGAGTGCAGCGAC  
TGCGGGAAAGCCTTCAACGACCCTTACGCCCTTAGGAGCCACGCAAGAACTCACCTCAAAGAGAAGCCCTTTGAC  
TGCAGTCAGTGTGGAATGCATTCCGGACCCTCTCGGCCCTGAAAATCCACATGCGAGTTCACACTGCGGAGAGG  
CCTTACAAGTGTGATCAGTGCGGGAAGGCTTACGGCCGGAGCTGCCACCTCATCGCACACAAGAGAACGCACACC  
GGAGAGAGGCCCTACGAGTGTACGACTGTGGGAAAGCTTTCCAGCACCCCTCCACCTCAAAGAGCAGGTGAGG  
AATCACACGGGGGAGAAAGCCCTACGCGTGCACGCAGTGCGGCAAAGCCTTCCGCTGGAAGTCCAACTTAATTTG  
CACAAGAAGAACCATGAGGATTACATCGTCAAGAAACCCGTGGAATGTGCGCAGTGCGGGAAGACCTTCCGAAAC  
CAGTCCATCCTTAAGACTCACATGAATCTCACACTGGAGAGAAACCATACGGGTGCGATCTCTGCGGGAAAGCT  
TTCAGCGCGAGTTCAAACCTCACCGCACACAGGAAGATACACACGCAAGAGAGACGCTACGAATGCGCCGCTGC  
GGGAAAGTCTTCGGTGACTATTTATCCCGCGGAGGCACATGAGCGTTACCTTGTAAAGAAACGAGTTGAGTGT  
AGGCAGTGTGGCAAGGCCTTCAGGAACAGTCAACGCTGAAGACGCACATGCGAAGCCACACGGGGGAGAAACCG  
TACGAATGCGATCACTGTGGGAAGGCCTTCAGCATAGGCTCCAACCTGAATGTGCACAGGCGGATCCACACCGGG  
GAGAAGCCCTACGAATGCCTTGTCTGCGGGAAAGCCTTCAGCGACCACTCATCCCTCAGGAGCCACGTGAAAAC  
CACCGGGGAGAGAAGCTCTTTGTGTATCCGTGTGGAAGGCTCCAGTGGAGCGCGCTGCTTTAGAGACACAGG  
ATGATTCAGACCGGAAACAGACCTCGTGGGTGTAAGAGGAAGCCTCTGTGAGCTCGCACCTTACTGGGTGCAAAA  
GAATCCACGGAACCTGGGAGAAGTCCAGTTCCTGTAAAACTGGGAAGACGAGGCGTTCTCATCCATAGGAGGT  
TTGTGAGAAGTACGCCGGGGGTGAAAATGTACGTCTGTAGCATGGAGAAGCCTTACGGGTACATTACGCTCTTA  
ACAAACACAGGAGGACTTAATGGCAGCTTGGCATTAAATGTCAAAATCCAAGCCGTGGCATTAAATGTCAAAATG  
ACTTCAGACCACTTCTAGCCTTCTGGGCCCATGAGTAATAATGAGCACACTAGGGAGCATCTCTGTAAACACAGT  
GGCTGGGGAAACCTTCTAGTCTCACTTGATTCTCATGACGGAATCACACTAAAGAGAGAAATCAGTGAAGT  
AAGGAACGTGGAAGGTGATGAATGGGCCGCAAACACGCCAGCTGCTTGTCTTTGTATGGCTTGCCAGCTAACA  
ATAGTGGTTCCATCTTTAAGGAAGAAGATGTTTGTATGGAGAAAATTTGTGGCCAATGAAGTCTGAAATACTTCC  
TGTCATCTGCCCCCTTTCCAGAAAACCTTGGCCGACCCTTGGTCTACAGCACGGGTCTCTCAGTCGGGCGACGATT  
GGCTGTCTAGGCGTCATTTGGCAATGTCTAGAGACATTTTGGTAGTTAGAATGGGGGGAAGATACTCCTGACTT  
GTAATAAGAAGACATCAGAGATGCTGCTAAGTCGGCTCCAGCACACAGGAGCCCCCACAACGAAGAGTTAGTGC  
CCCCAAACGTCACTGTTGCTGAGGTTGAAAATAATCATGCGATCATTCCTCAATTACTGCCTGCAGCAATTCCTC  
CATTTTTATGAATCTTGTGAGCACTTACGCTAGGAGAAATTTCTTTTACAAAACCTTTTAAATACAATTAGTGCT  
GATAATTCCTATGTGGAATGATTCCAGCCATGGTCCCCCACTTGAGCATGTGAATATTCTACGGAGAGAAGC  
CCCAGCGAGATTTTCCGGTGAATACGGGATTGCACCTACTCTTTCATCACGGAAACAGACCCCCGAGAGAAGCC  
CCAACGAGATTTTCCGGTGAATACGGGACTGCACGTACTCTCTCATGAAAACAGAGCCCCGTTTATAAATTT  
TTCATCTTTATTTTTAAGGTTATACTCCTCTAAATAACCTTAAGCCTCATCAAGAAAGGTTTGTATTATAGTATT  
TTTACTATAGCTTCATCCTTGATAACGTCCTAATTTCTTCTGGACAACCTCCTTGACCAATGGCATATTGAGAT  
CTATGTGACATGAGGATATTTCTCAGTACCCTTTGTTACTGGTACCTGATGCACACGGATTGCGACAGAGCAT  
GATGCCCTCATCAAGTGGTAATATGTTTGCAGCCTGCTGTCCAGCCAAGAGTGACAGATACTTCTAGTGACTTCC

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**FIGURE 5227B**

CCGGTATCCACTCTCATCTTCTTCCAATATCAAGAGAATCCAGGTTCTGTCAGATTAGTAAGGTGTGCTAATCTA  
AATTTTAAAAAATCTCTTACAGGTTTTCTTGCAGCTGGTACCATCCATGTCTCACAGCCCTGGCCACTGACAGAT  
CAGCAGATGTCACCACATGGGCTTCTGAGAAAGCTCTTGAATGGGGATCGTTCTTAAACATGAATTCCTCCCTGT  
ATGTTTTGTTCTTTGCTTTACTTTTCACCTTGCAAAGAGATCCAGTACCTAGTATTGGAAGATCCACCTTAACGA  
CCGTGCATATGAAAACCACAGTCTAAGGAAGTGACTGCAGAAAGCTCACAGCGACCCTGGCCTCCCTGTGGCCT  
CTTTGAGTGTCTGCAGCAGCCCTGGACTTCCAGACTTCTATCATGAGAAAAATAAACTGATTATTGGTTTA  
AGCTGC

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**FIGURE 5228**

MAALSPTFATSTQDSTCLQDSEFPVSSKDHSCPQNLDLFVCSGLEPHTPSVGSQESVTFQDVAVDFTEKEWPLLD  
SSQRKLYKDVMLENYSNLTS LGYQVGKPSLISHLEQEEPRTEERGAHQGACADWETPSKTKWSLLMEDIFGKET  
PSGVTMERAGLGEKST EYAH LFEVFGMDPHLTQPMGRHAGKRPYHRRDYGVAFKGRPHLTQHMSMYDGRKMHECH  
QCQKAFTTSASLTRHRIHTGEKPYECSDCGKAFNDPSALRSHARTHLKEKPFDCSQCGNAFRTLSALKIHMRVH  
TGERPYKCDQCGKAYGRSCHLIAHKRTHHTGERPYECHDCGKAFQHPSHLKEHVRNHTGEKPYACTQCGKA FRWKS  
NENLHKKNHMVEKTYECKECGKSFGDLVSRRKHMRIHIVKKPVECRQCGKTFRNQSI LKTHMNSHTGEKPYGCDL  
CGKAFSASSNLTAHRKIHTQERRYECAACGKVFGDYL SRRRHMSVHLVKKRVECRQCGKA FRNQSTL KTHMRSH  
GEKPYECDHCGKA FSIGSNLNVHRR IHTGEKPYECLVCGKA FSDHSSLRSHVKTHRGEKLFVSSVWKRLQ



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**FIGURE 5229**

GTGTGCAATGGCTGCACACAGCAGCTTCCTTGGTAGTGTACGCAGCCTGTTGGTTGTATGGGTTGCTCTAAGGGA  
CCTTGGAGACAGGCCTTTCCGATGGATGTTTCATGTTTCTAACCTTGCACTACCACAATGTAGGCTCCAAACAGGC  
ATGTGAGGTGCCTTTGGAAAGCCCCAGGGCACTGTGGCCAGGGTTGACATTGGCCAAGTTATCATGTCCATCCGC  
ACCAAGCTGCAGAACAAGGAGCATGCGATTGAGGCCTTGCGCAGGGCCAAGTTCAAGTTTCCTGGCCGCCAGAAG  
ATCTACATCTCAAAGAAGTGGGGCTTCACCAAGTTCAATGCTGATGAATTTGAAGACATGGTGGCTGAGAAGCGG  
CTCATCCCAGATGGCTGTGGGGTCAAGTACATCCCCAATCGTGGCCCTCTGGACAAGTGGCTGGCCCTGCACTCA  
TGAGGGCTTCCAATGTGCTGCCCCCCTATTAATACTACCAATAAATTCTACTTCCTGTCCAAAAAAAAA

CTAGTTCGGGACGCCGGGCTAGGGGCGCGCTATGTCGGCCGCTACAGGTCGCCGCCGCGCTGCTGCTGCTGCTGTG  
CTCAGGCGCTGGCGGGACAGACTCTCTTCCAGAACCCAGAAGAGGGCTGGCAGCTGTACACCTCAGCCCAGGCCCC  
TGACGGGAAATGCATCTGACAGGCCGTGATCCCAGCGCAGAGTACCTGCTCTCGAGATGGCAGGAGTCGGGAGCT  
GCGGCAACTGATGGAGAAGGTCCAGAACGTCTCCCAGTCCATGGAGGTCTTGAGTTGCGGACGTATCGCGACCT  
CCAGTATGTACGCGGCATGGAGACCCCTCATGCGGAGCCTGGATGCGCGGCTCCGGGCAGCTGATGGGTCCCTCT  
GGCCAAGAGCTTCCAGGAGCTGAAGGACAGGATGACGGAACCTGTTGCCCTGAGCTCGGTCTGGAGCAGTACAA  
GGCAGACACGCGGACCATTGTACGCTTGCGGGAGGAGGTGAGGAATCTCTCCGCAGTCTGGCGGCCATTACAGGA  
GGAGATGGGTGCCCTACGGGTATGAGGACCTGCAGCAACGGGTGATGGCCCTGGAGGCCCGGCTCCACGCCTGCGC  
CCAGAAGCTGGGCTGTGGGAAGCTGACCGGGGTGAGTAACCCCATCACCGTTCGGGCCATGGGGTCCCGCTTCGG  
CTCTGGATGACTGACAGATGGCCCCAGTGCGGATAGCCGGGTCTGGTACATGGATGGCTATTACAAAGGCCG  
CCGGGTCTTGAGTTCGGTACCCTGGGAGACTTCATCAAAGGCCAGAACTTATCCAGCACCTGCTGCCCCAGCC  
GTGGGCGGGCACGGGCCACGTGGTGTACAACGGCTCCCTGTTCTATAACAAGTACCAGAGCAACGTGGTGGTCAA  
ATACCACTTCCGCTCGCGCTCTGTGCTGGTGCAGAGGAGCCTCCCGGGCGCCGGTTACAACAACACCTTCCCCTA  
CTCTGGGGCGGGCTTCTCCGACATGGACTTCATGGTGGACGAGAGCGGGCTCTGGGCTGTGTACACCACCAACCA  
GAACGCGGGCAACATCGTGGTCAGCCGGCTGGACCCGCACACCCTCGAGGTCATGCGGTCTGGGACACCGGCTA  
CCCCAAGCGCAGCGCTGGCGAGGCCTTCATGATCTGCGGTGTGCTCTACGTGACCAACTCCCACCTGGCTGGGGC  
CAAGGTCTACTTCGCCATTTTTACCAACACGTCCAGTTACGAGTACACGGACGTGCCCTTCCACAACCAGTATTC  
CCACATCTCGATGCTGGATTACAACCCCCGGGAGCGCGCCCTCTATACCTGGAACAACGGCCACCAGGTGCTCTA  
CAATGTCACCCTGTTTCACGTCATCAGCACCTCTGGGGACCCCTGAGCCAAATGCTGTGGCTCGGGCTGCTGCTG  
GGGGGCTCCGGGGGCTGGGGGCCCTTTTCATCTGCTGTGCTCCCTCAAGGTGATCTCTGCTCTGTCTGTCAGC  
CCCTTCTCCCGCCTTTTTGCTGGGCTTTTGTTCTCTGCTCATGTAATTTCTGCTATTTTTTCAATTTCCCTC  
TTCTCCTTTATTGATCTCTGCTTTTAATACACCACCTCTTCTTCTGCTTTTATGCTTTTATGGATGTCTTTTTCTTTTT  
ATGGCTCTGGTTCTCAGTCTCTTCCGCTCTGCTCTCTGCTCTCTGCTCTCTCTCTGCTCTTCCACCCCTCCCTC  
CTTGCTTCCCACCCATCTCTCATCCCTCACTCCCAACCCCAACCCCAACCCCAAGGAGTTGAGTGCATGGATCTGT  
TTCTTTTTTTATTACATCTTTTTCTTTCCGGTTTGCCGGAATAAAACAGGACCTTGACATTTGAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5231**

MWPLTVPPFLLLLLCSGLAGQTLFQNPEEGWQLYTSAPDQKCICTAVIPAQSTCSRDRSRELRLMEKVQNV  
SQSMEVLELRITYRDLQYVRGMETLMRSLDARLRAADGSLSAKSFQELKDRMTELLPLSSVLEQYKADTRTIVRLR  
EEVRNLSGSLAAIQEEMGAYGYEDLQQRVMALEARLHACAQKLGCGKLTGVSNPITVRAMGSRFGSWMTDTMAPS  
ADSRVWYMDGYKGRRVLEFRTLGDFFIKGNFIQHLLPQPWAGTGHVVYNGSLFYNKYQSNVVVKYHFRSRSVLV  
QRS LPGAGYNNTFPYSWGGFSDMDFMVDESGLWAVYTTNQNAGNIVVSRLDPHTLEVMSWDTGYPKRSAGEAFM  
ICGVLYVTNSHLAGAKVYFAYFTNTSSYEYTDVPFHNQYSHISMLDYNPRERALYTWNNGHQVLYNVTLFHVIST  
SGDP

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**FIGURE 5232**

AGGAGGCCCTCGTGGAGGACACAGCAGCAGTGGGACAGTCAGGGAGGTCCCGGCACCAGAAGCGCGCCCCGCGCCCAG  
GCGCAGCTCCGCAACCTCGAGGCCTATGCCGCGAACC CGCACTCGTTCGTGTTACGCGAGGCTGCACGGGTGCG  
AACATCCGGCAGCTCAGCCTGGACGTGCGGCGGGTCATGGAGCCGCTCACTGCCAGCCGTCTGCAGGTTCTAAG  
AAGAACTCGCTGAAGGACTGCGTGGCAGTGGCTGGGCCCTCGGGGTCACACACTTTCTGATCCTGAGCAAAACA  
GAGACCAATGTCTACTTTAAGCTGATGCGCCTCCAGGAGGCCACCTTGACCTTCCAGGTGAAGAAGTACTCG  
CTGGTGGTGTGATGTGGTCTCCTCACTGCGCCGGCACCGCATGCACGAGCAGCAGTTTGCCACCCACCCCTCCTG  
GTACTCAACAGCTTTGGCCCCATGGTATGCATGTGAAGCTCATGGCCACCATGTTCCAGAACCTGTTCCCTCC  
ATCAACGTGCACAAGGTGAACCTGAACACCATCAAGCGCTGCCTCCTCATCGACTACAACCCCGACTCCCAGGAG  
CTGGACTTCCGCCACTATAGCATCAAAGTTGTTCTGTGGGCGCGAGTCGCGGGATGAAGAAGCTGCTCCAGGAG  
AAGTTCCCCAACATGAGCCGCCTGCAGGACATCAGCGAGCTGCTGGCCACGGGCGCGGGGCTGTGCGAGAGCGAG  
GCAGAGCCTGACGCGCACCACAACATCACAGAGCTGCCTCAGGCTGTGCTGGCCGTGGCAACATGCGGGCCCAG  
CAGAGTGCAGTGGGCTCACCGAGATCGGCCCGCGGATGACACTGCAGCTCATCAAGGTCCAGGAGGGCGTCGGG  
GAGGGCAAAGTGATGTTCCACAGTTTGTGAGCAAGACGGAGGAGGAGCTGCAGGCCATCCTGGAAGCCAAGGAG  
AAGAAGCTGCGGCTGAAGGCGCAGAGGCAGGCCCAGCAGGCCCAGAATGTGCAGCGCAAGCAGGAGCAGCGGGAG  
GCCCCAGAAAGAAGAGCCTGGAGGGCATGAAGAAGGCACGGGTGCGGGGTAGTGATGAAGAGGCCTCTGGGATC  
CCTTCAAGGACGGCGAGCCTGGAGTTGGGTGAGGACGATGATGAACAGGAAGATGATGACATCGAGTATTTCTGC  
CAGGCGGTGGGCGAGGCGCCAGTGAGGACCTGTTCCCCGAGGCCAAGCAGAAACGGCTTGCCAAGTCTCCAGGG  
CGGAAGCGGAAGCGGTGGGAAATGGATCGAGGCAGGGGTGCGCTTTGTGACCAGAAGTTTCCCAAGACCAAGGAC  
AAGTCCCAGGGAGCCCAGGCCAGGCGGGGGCCAGAGGGGCTTCCCGGGATGGTGGGCGAGGCCGGGGCCGGGGC  
CGCCCAGGGAAGAGAGTGGCCTGAGCCCAAGCCGACCGGAGCAGCGGCTGGATTGAACGCCCCAGATTGGGGCC  
CGAGATGTGGCCCTCGGTTTCCTTTCATAAAGGAGTTGTGTCCCCAGCCCTTCCACTCCAGTAAAGAAGTGAATT  
GGC

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**FIGURE 5233**

MGQSGRSRHQKRARAQAQLRNLEAYAANPHSFVFTRGCTGRNIRQLSLDVRVMEPLTASRLQVRKKNSLKDCVA  
VAGPLGVTHFLILSKTETNVYFKLMRLPGGPTLTTFQVKKYSIVRDVVSSLRRHRMHEQQFAHPPLLVLNSFGPHG  
MHVKLMATMFQNLFPSINVHKVNLNTIKRCLLIDYNPDSQELDFRHYSIKVVPVGASRGMKKLLQEKFPNMSRLQ  
DISELLATGAGLSESEAEPDGDHNITELPQAVAGRGNMRAQQSAVRLTEIGPRMTLQLIKVQEGVGEGKVMFHSF  
VSKTEEEELQAILEAKEKKLRLKAQRQAQQAQNVQRKQEQREAHKKSLGEMKKARVGGSDDEEASGIPSRITASLEL  
GEDDDEQEDDDIEYFCQAVGEAPSEDLFPEAKQKRLAKSPGRKRRWEMDRGRGLCDQKFPKTKDKSQGAQARR  
GPRGASRDGGRGRGRPRGKRVA

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**FIGURE 5234**

CTTTTTGCGATGCTTACTGGGGACTTTGATTCCAAGCCCAGTTGGGCCGACCAGGTGGAGGAGGAGGGGGAGGAC  
GACAAATGTGTACACGAGCTCCTCAAGGGGATCCCTCTGGCCACAGGTGACACCAGCCCAGAGCCAGAGCTA  
CTGCCGGGAGCTCCACTGCCGCCTCCCAGGAGGTCTATCAACGGAAACATAAAGACAGTGACAGAGTACAAGATA  
GATGAGGATGGCAAGAAGTTCAAGATTGTCCGCACCTTCAGGATTGAGACCCGGAAGGCTTCAAAGGCTGTGCA  
AGGAGGAAGAAGTGAAGAAGTTCGGGAAGTCAGAGTTTGACCCCCCGGACCCAATGTGGCCACCACCACTGTC  
AGTGACGATGTCTCTATGACGTTTCATCACCAGCAAAGAGGACCTGAAGTGGCAGGAGGAGGAGGACCCCTATGAAC  
AAACTCAAGGGCCAGAAGATCGTGTCTGCGCATCTGCAAGGGCGACCACTGGACCACCCGCTGCCCTACAAG  
GATACGCTGGGGCCCATGCAGAAGGAGCTGGCCGAGCAGCTGGGCCTGTCTACTGGCGAGAAGGAGAAGCTGCCG  
GGAGAGCTAGAGCCGGTGCAGGCCACGCAGAACAGACAGGGAAGTATGTGCCGCCGAGCCTGCGCGACGGGGCC  
AGCCGCCCGGGGAGTCCATGCAGCCCAACCGCAGAGCCGACGACAACGCCACCATCCGTGTACCAACTTGTCA  
GAGGACACGCGTGAGACCGACCTGCAGGAGCTCTCCGGCCTTTCGGCTCCATCTCCCGCATCTACCTGGCTAAG  
GACAAGACCACTGGCCAATCCAAGGGCTTCGCCTTCATCAGCTTCACCGCCGCGAGGATCGTGCGCGTGCCATT  
GCCGGGGTGTCCGGCTTTGGCTACGACCACCTCATCCTCAACGTCGAGTGGGCCAAGCCGTCCACCAACTAAGCC  
AGCTGCCACCGTGTACTCGGTCCGGGACCCTTGGCGACAGAAGACAGCCTCCGAGAGCGGGGCTCCAAGGGCAA  
TAAAGCAGCTCCACTCTCAA

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**FIGURE 5235**

MPTGDFDSKPSWADQVEEEGEDDKCVTSELLKGIPLATGDTSPPELLPGAPLPPPKEVINGNIKTVTEYKIDED  
GKKFKIVRTFRIETRKASKAVARRKNWKKFGNSEFDPPGPNVATTTVSDDVSMTFITSKEDLNCQEEEDPMNKLK  
GQKIVSCRICKGDHWTTTRCPYKDTLGPMQKELAEQLGLSTGEKEKLPGELEPVQATQNKTGKYVPPSLRDGASRR  
GESMQPNRRADDNATIRVTNLSEDTRDTLQELFRPFGSISRIYLAKDKTTGQSKGFAFISFHRREDRARAIAGV  
SGFGYDHLILNVEWAKPSTN

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**FIGURE 5236**

TGTGAGGTCGCGTTCCCCAGTGTTACGGAGGGTCCTTGAGGCAGGAGTGAAAATTGGGTCTGGGGGTTAGTCCTG  
GGGTGGAGGTCTGGGCACGCCGGGTCTGGACCCCTCCATCTTCGGTTTTGCACACCCCGCTTTCCAGCGCGGAGT  
CGCGGCGGGTAGGGCGGCGTCGCGTGCGTGACGTCATCCAGCGGCGCCTCGCGAGGCTCCAGTGGCCTTGACCTC  
CCGCGGCGGTGGGAGGCTGCGCGGCGATGCTGCAGTTTCGTCCGGGCCGGGGCGCGGGCCTGGCTTCGGCCTACCGG  
CAGCCAGGGCCTGAGTTCCCTGGCGGAAGAGGCAGCGGTGCGACCGAGAACCCGGAGCAGGTGGCGAGCGAGGG  
TCTCCCGGAGCCCGTGCTGCGCAAAGTCGAGCTCCCGGTACCCACTCATCGACGCCCAGTGCAGGCCTGGGTGCA  
GTCTTTGCGGGGCTTCGAGCAGGAGCGCGTGGGCCTGGCCGACCTGCACCCCGATGTTTTGCCCACCGCGCCAG  
GCTGGACATACTGCACCAGGTTGCTATGTGGCAGAAGAACTTCAAGAGAATTAGCTATGCCAAGACCAAGACGAG  
AGCCGAGGTGCGGGGCGGTGGCCGAAGCCTTGGCCGCAGAAAGGCACTGGGCGGGCCCGGCATGGCAGCATCCG  
CTCTCCGCTCTGGCGAGGAGGAGGTGTTGCCCATGGCCCCGGGGCCCCACAAGTTACTACTACATGCTGCCCAT  
GAAGGTGCGGGCGCTGGGTCTCAAAGTGGCACTGACCGTCAAGCTGGCCCAGGACGACCTGCACATCATGGACTC  
CCTAGAGCTGCCCACCGGAGACCCACAGTACCTGACAGAGCTGGCGCACTACCGCCGCTGGGGGGACTCCGTACT  
CCTCGTGGACTTAACACACGAGGAGATGCCACAGAGCATCGTGGAGGCCACCTCTAGGCTTAAGACCTTCAACTT  
GATCCCGGCTGTTGGCCTAAATGTGCACAGCATGCTCAAGCACCAGACGCTGGTCCTGACGCTGCCACCGTCTGC  
CTTCTGGAGGACAAGCTGCTCTGGCAGGACTCACGTTACAGACCCCTCTACCCCTTCAGCCTGCCCTACAGCGA  
CTTCCCCGACCCCTACCCACGCTACCCAGGGCCAGCGGCCACCCCGTACCACTGTTGATGTGAAGCACCTCT  
TCTGAGCCAGGCCGAGCCCCTGGCCGACTTGGGAGCCTCAGGCCACGCCCACCCCTTCGAGGAAGGTGTCACCTG  
GACCCCTTCATTCCACGGAGGAAGCTGAGGCCACAGGGAGCGGCCATCGCCATTGGGAAGGGGCGACTCCACGGA  
AAGCCCAGACGGGCTTCTGCATCCATTCCCTCTTTTTGTTTTTAAATAAATTGTATTTTG



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**FIGURE 5237**

GGCACGAGGCCGCCACCCGAGCCGGAGCGGGCTGGGCCGCCAAGGCAAGATGGTGGACTACAGCGTGTGGGACCA  
CATTGAGGTGTCTGATGATGAAGACGAGACGCACCCCAACATCGACACGGCCAGTCTCTTCCGCTGGCCGGCATCA  
GGCCCGGGTGAACGCATGGAGCAGTTCCAGAAGGAGAAGGAGGAACTGGACAGGGGCTGCCGCGAGTGCAAGCG  
CAAGGTGGCCGAGTGCCAGAGGAACTGAAGGAGCTGGAGGTGGCCGAGGGCGGCAAGGCAGAGCTGGAGCGCCT  
GCAGGCCGAGGCACAGCAGCTGCGCAAGGAGGAGCGGAGCTGGGAGCAGAAGCTGGAGGAGATGCGCAAGAAGGA  
GAAGAGCATGCCCTGGAACGTGGACACGCTCAGCAAAAGACGGCTTCAGCAAGAGCATGGTAAATACCAAGCCCGA  
GAAGACGGAGGAGGACTCAGAGGAGGTGAGGGAGCAGAAACACAAGACCTTCGTGGAAAAATACGAGAAACAGAT  
CAAGCACTTTGGCATGCTTCGCCGCTGGGATGACAGCCAAAAGTACCTGTGACACAACGTCCACCTGGTGTGCGA  
GGAGACAGCCAATTACCTGGTCATTTGGTGCATTGACCTAGAGGTGGAGGAGAAATGTGCACTCATGGAGCAGGT  
GGCCCAACAGACAATCGTCATGCAATTTATCCTGGAGCTGGCCAAGAGCCTAAAGGTGGACCCCGGGCCTGCTT  
CCGGCAGTTCTTCACTAAGATTAAGACAGCCGATCGCCAGTACATGGAGGGCTTCAACGACGAGCTGGAAGCCTT  
CAAGGAGCGTGTGCGGGGCCGTGCCAAGCTGCGCATCGAGAAGGCCATGAAGGAGTACGAGGAGGAGGAGCGCAA  
GAAGCGGCTCGCCCCGGCGGCTGGACCCCGTCGAGGTCTACGAGTCCCTCCCTGAGGAACTCCAGAAGTGCTT  
CGATGTGAAGGACGTGCAGATGCTGCAGGACGCCATCAGCAAGATGGACCCACCGACGCAAAGTACCACATGCA  
GCGCTGCATTGACTCTGGCCTCTGGGTCCCCAACTCTAAGGCCAGCGAGGCCAAGGAGGGAGAGGAGGCAGGTCC  
TGGGGACCCATTACTGGAAGCTGTTCCCAAGACGGGCGATGAGAAGGATGTCAGTGTGTGACCTGCCCCAGCTAC  
CACCGCCACCTGCTTCCAGGCCCTATGTGCCCTTTTCAGAAAACAGATAGATGCCATCTCGCCCGCTCCTGAC  
TTCCTCTACTTGGCTGCTCGGCCAGCCTGGGGGGCCCGCCAGCCCTCCCTGGCCTCTCCACTGTCTCCACTC  
TCCAGCGCCCATTCAGTCTCTGCTTTGAGTCAAGGGGCTTCACTGCCTGCAGCCCCCATCAGCATTATGCCAA  
AGGCCCCGGGGTCCGGGGAAGGGCAGAGGTACCAGGCTGGTCTACCAGGTAGTTGGGGAGGGTCCCCAGCCAAG  
GGGCCGGCTCTCGTCACTGGGCTCTGTTTTCACTGTTGCTGTGCTGTGTCTTCTATTGGCAAACAGCAAT  
GATCTTCCAATAAAAGATTTTCAGATGCTCAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 5238**

MVDYSVWDHIEVSDDDETHPNIDTASLFRWRHQARVERMEQFQKEKEELDRGCRECKRKVAECQRKLKELEVAE  
GGKAELERLQAEAAQQLRKEERSWEQKLEEMRKKEKSMWNVDTLSDGFSKSMVNTKPEKTEEDSEEVREQKHKT  
FVEKYEQIKHFGMLRRWDDSQYLSDNVHLVCEETANYLVIWCIDLEVEEKCALMEQVAHQTIVMQFILELAKS  
LKVDPRACFRQFFTKIKTADRQYMEGFNDELEAFKERVGRAKLRIEKAMKEYEEEEERKKRLGPGGLDPVEVYES  
LPEELQKCFDVKDVMQLQDAISKMDPTDAKYHMQRCIDSGLWVPNSKASEAKEGEEAGPGDPLLEAVPKTGDEKD  
VSV

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**FIGURE 5239**

CGCGCAGCGATGGAGGCGCCGGGGCTCGGGCGGTGGAGGCGGAGCCGGAGCGCGGCCATGGCGGGGTCCCTGAGT  
GCCAGAGGTGGTGGTGTGCTTATCTTCTGGAACCCCATGCAGCCAGATCCCAGGCCCTAGCGGGGCTGGGGCCTG  
CTGCCGATTCTGCCCCTGCAGTCACAGTGCCCTGAGGGGGCAGGGGACGCGGTGATGTACGCCTCCACTGAGTG  
CAAGGCGGAGGTGACGCCCTCCAGCATGGCAACCGCACCTTCAGCTACACCCTGGAGGATCATACCAAGCAGGC  
CTTTGGCATCATGAACGAGCTCGGGCTCAGCCAGCAGCTGTGTGACGTACACTGCAGGTCAAGTACCAGGATGC  
ACCGGCCGCCAGTTTCATGGCCCAAGGTGGTGTGGCCTCATCCAGCCCTGTCTTCAAGGCCATGTTACCAA  
CGGGCTGCGGGAGCAGGGCATGGAGGTGGTGTCCATTGAGGGTATCCACCCCAAGGTCATGGAGCGCCTCATTGA  
ATTGCGCTACACGGCCTCCATCTCCATGGGCGAGAAGTGTGTCTCCACGTCAATGAACGGTGCTGTATGTACCA  
GATCGACAGCGTTGTCCGTGCCCTGCAGTGACTTCCTGGTGCAGCAGCTGGACCCACAGCAATGCCATCGGCATCGC  
CAACTTCGCTGAGCAGATTGGCTGTGTGGAGTTGCACCAGCGTGCCCGGGAGTACATCTACATGCATTTTGGGGA  
GGTGGCCAAGCAAGAGGAGTTCTTCAACCTGTCCCACTGCCAAGTGGTGACCCTCATCAGCCGGGACGACCTGAA  
CGTGCGCTGCGAGTCCGAGGTCTTCCACGCCTGCATCAACTGGGTCAAGTACGACTGCGAACAGCGACGGTTCTA  
CGTCCAGGCGTGTCTGCGGGCGGTGCGCTGCCACTCGTTGACGCCGAACCTTCTGCAGATGCAGCTGCAGAAGTG  
CGAGATCCTGCAGTCCGACTCCCGCTGCAAGGACTACCTGGTCAAGATCTTCGAGGAGCTCACCTGCACAAGCC  
CACGCAGGTGATGCCCTGCCGGGCGCCCAAGGTGGGCGCCTGATCTACACGCGGGCGGCTACTTCCGACAGTC  
GCTCAGCTACCTGGAGGCTTACAACCCAGTGACGGCACCTGGCTCCGGTTGGCGGACCTGCAGGTGCCGCGGAG  
CGGCCTGGCCGGCTGCGTGGTGGGCGGGCTGTTGTACGCCGTGGGCGGCAGGAACAACCTGCCCCGACGGCAACAC  
CGACTCCAGCGCCCTGGACTGTTACAACCCCATGACCAATCAGTGGTCGCCCTGCGCCCCATGAGCGTGCCCCG  
TAACCGCATCGGGGTGGGGGTCAATCGATGGCCACATCTATGCCGTGCGCGGCTCCACGGCTGCATCCACCACAA  
CAGTGTGGAGAGGTATGAGCCAGAGCGGGATGAGTGGCACTTGGTGGCCCCAATGCTGACACGAAGGATCGGGGT  
GGGCGTGGCTGTCTCAATCGTCTCCTTTATGCCGTGGGGGGCTTTGACGGGACAAACCGCCTTAATTCAGCTGA  
GTGTTACTACCCAGAGAGGAACGAGTGGCGAATGATCACAGCAATGAACACCATCCGAAGCGGGGCAGGCGTCTG  
CGTCTGCACAACCTGTATCTATGCTGCTGGGGGCTATGATGGTCAGGACCAGCTGAACAGCGTGGAGCGCTACGA  
TGTGGAAACAGAGACGTGGACTTTCGTAGCCCCCATGAAGCACCGGCGAAGTGCCCTGGGGATCACTGTCCACCA  
GGGGAGAATCTACGTCTTGGAGGCTATGATGGTCACACGTTCTGGACAGTGTGGAGTGTTACGACCCAGATAC  
AGACACCTGGAGCGAGGTGACCCGAATGACATCGGGCCGGAGTGGGGTGGGCGTGGCTGTACCATGGAGCCCTG  
CCGGAAGCAGATTGACCAGCAGAACTGTACCTGTTGAGGCACCTTTGTTTCTTGGGCAAAAATACAGTCCAATGG  
GGAGTATCATTTGTTTTGTACAAAAACCGGGACTAAAAGAAAAGACAGCACTGCAAATAACCCATCTTCCGGGAA  
GGGAGGCCAGGATGCCTCAGTGTTAAAATGACATCTCAAAGAAGTCCAAAGCGGGAATCATGTGCCCTCAGCG  
GAGCCCCGGGAGTGTTCAAGACAGCCTGGCTGGGAAAGGGGGTGTGGAAAGAGCAGGCTTCCAGGAGAGAGGCC  
CCAAACCTCTGGCCGGGTAAATAGGCCTGGGTCCCACTCACCCATGCCGGCAGCTGTCACCATGTGATTATTCT  
TGGATACCTGGGAGGGGGCAATGGGGGCTCAGGGGGAGGCCCTCTGGAAATGTGGTTCCAGGGATGGGCC  
TGTACATAGAAGCCACCGGATGGCACTTCCCCACCGGATGGACAGTTATTTTGTGATAAGTAACCTGTAAATT  
TCCAAGGAAAATAAAGAACAGACTAACTAGTGTCTTC

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**FIGURE 5240**

TTTTACAAAACGCTCTCCTTGTTGAAGAAGAAGGACCCCCGCATTTATCAGAAAGATGCCACCTTCTATAACAGA  
ACAGCATCGTCATCAGACAGTGAGGAGGACCCAGAAGCCTTGGAGAAGCAGAAGAAAGTGCGGCCCATGTACCTG  
AAGGACTACGAGAGGAAGGTTATCTTGGAGAAGGCAGGCAAATATGTTGATGAGGAGAACTCAGACGGGGAGACT  
TCCAATCACAGACTCCAGGAGACATCGTCGCAAAGTTATGTGGAGGAACAGAAACAGCTCAAGGAAAGCTTCCGG  
GCATTTGTGGAGGACAGTGAGGACGAGGACGGCGCTGGGGAGGGCGGCTCCAGTTTGCTGCAGAAACGTGCCAAA  
ACCAGGCAGGAGAAGGCCAGGAGGAGGCCGACTACATCGAGTGGCTGAAGGGACAGAAAGAGATTGCGGAACCCA  
GATTCCCTGAAGGAACTGACGCATCTCAAGGAATACTGGAACGACCCTGAGTTGGATGAAGGGGAGCGGTTCCCTG  
CGGGATTACATCCTCAACAAACGCTATGAGGAGGAGGAAGAGGAGGAGGAAGATGAAGAGGAAATGGAGGAAGAG  
GAGGGGGTCCACGGTCCCCAGTCCAGCTGGCTGTGGACGACTCCTCAGACGAAGGGGAGCTGTTTCTGAAGAAA  
CAGGAGGACTTTGAACAGAAGTACAATTTCCGTTTCGAGGAGCCGACTCAGCATCGGTCAAGACCTACCCACGC  
AGCATCGCGTCTCCGTGCGCCGTAAGGATGAGCGCAGAAAGGAGAAGAGGGAAGAGACTCGGGAGCGAAAGAAG  
AGGGAGAAAGCAAAGAAGCAGGAAGAGCTCAAGCAGCTGAAGAACCTGAAGAGGAAGGAGATTCTGGCCAAGCTG  
GAGAAGCTGCGGAAAGTAACAGGCAACGAGATGCTGGGCCTCGAGGAGGGGGACCTTGAAGACGACTTCGACCCT  
GCCCAGCACGACCAGCTCATGCAGAAGTGCTTTGGGGACGAGTACTACGGGGCCGTGGAGGAGGAGAAGCCACAA  
TTTGAGGAAGAAGAAGGGCTTGAAGACGACTGGAACCTGGGACACGTGGGACGGGCCTGAGCAGGAGGGAGACTGG  
AGCCAGCAGGAGCTGCACTGTGAGGACCCCAACTTCAACATGGACGCCGACTACGACCCAGCCAGCCGAGGAAG  
AAAAAGCGCGAGGGCCCCCTTGACGGGCAAGAAGAAGCGCAAGTCGCCCTTCGCCGCGGCCGTGGGGCAGGAGAAG  
CCCGTGTGTTGAACCCGGGGACAAGACGTTTCGAGGAGTACCTGGATGAGTATTACCGGCTGGACTACGAGGACATC  
ATCGACGACCTGCCCTGTCGCTTCAAGTACCGCACAGTGGTGGCCTGTGACTTTGGCCTCAGCACTGAGGAGATC  
CTCGCTGCTGACGATAAGGAGCTGAACCGGTGGTGCTCCCTAAAGAAGACCTGCATGTACAGGTCAGAGCAGGAG  
GAGCTGCGGGACAAGCGGGCGTACAGCCAGAAGGCCCAAGAACTCATGGAAAAAGCGGCAGGTCTTCAAGTCACTC  
TGCCGAGAAGAGGCAGAGACACCTGCGGAAGCCACAGGGAAGCCACAGAGAGATGAAGCCGGGCCACAGAGGCAG  
CTGCCAGCCCTTGATGGCAGCTTGATGGGGCCGGAGAGTCCCCAGCACAGGAAGAGGAAGCCCTGTATCACCC  
CACAAGAAGCCAGCCCCCAGAAGCGGAGGAGGGCCAAGAAGGCACGGCTGCTGGGCCCCACTGTGATGCTTGGT  
GGATGCGAGTTCAGCCGCCAGAGACTGCAGGCCTTTGGCCTCAACCCCAAACGGCTGCACTTCCGCCAGCTGGGC  
CGGCAGCGGAGGAAACAACAGGGGCCCAAGAACAGCTCCTGAGCACCAGGGAGCAGGCAGGGGCCCTCAGGCTCCT  
CTCCTCAAATCAAGCCCTGGACAGGTCTCGACCCACAAGTACTATCTGCTGCAGAGATCCTCTCATCTGTGGCC  
AGGCACGCCTGTAATCCAGCACTTTGGGAGCCGAGGTGAAAGGATCACTTGAGCCCAGGAATTGGAGACCAGC  
GTGGGCAACTTAGCGAGACTCCATCTCTACAAAATGTGGTGACACATGCCTGTAGTCCCAGCTACTCAGGAGGCT  
GGGGAAGGAAGATCACTTAAGGCCATGAGTTTGAGGCTACAGAGAGCTATGATTGCACCACTGCACTCCAGCCTG  
GGCAACAAAGCAAGACCCCTGTCTCTTG

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**FIGURE 5241**

GGCGCTTCCGCAGGAAGAAGGAAGCGGCGCCGCCATCGCCTCCCGGCGCTCCCTCCCCGACTCCTAAGTCCTTCG  
GCCGCCACCATGTCCGCCTCGGCTGTCTTCATTCTGGACGTTAAGGGCAAGCCATTGATCAGCCGCAACTACAAG  
GGCGATGTGGCCATGAGCAAGATTGAGCACTTCATGCCTTTGCTGGTACAGCGGGAGGAGGAAGGCGCCCTGGCC  
CCGCTGCTGAGCCACGGCCAGGTCCACTTCCTATGGATCAACACAGCAACCTCTACTTGGTGGCCACCACATCG  
AAGAATGCCAATGCCTCCCTGGTGTACTCCTTCTGTATAAGACAATAGAGGTATTCTGCGAATACTTCAAGGAG  
CTGGAGGAGGAGAGCATCCGGGACAACCTTTGTCAATGCTTACGAGTTGCTGGACGAGCTCATGGACTTTGGCTTC  
CCGCAGACCACCGACAGCAAGATCCTGCAGGAGTACATCACTCAGCAGAGCAACAAGCTGGAGACGGGCAAGTCA  
CGGGTGCCACCCACTGTCAACACGCTGTGTCTGGCGCTCCGAGGGTATCAAGTATAAGAAGAACGAGGTCTTC  
ATTGATGTCATAGAGTCTGTCAACCTGCTGGTCAATGCCAACGGCAGCGTCCTTCTGAGCGAAATCGTCGGTACC  
ATCAAGCTCAAGGTGTTTCTGTCAAGGAATGCCAGAGCTGCGGCTGGGCCTCAATGACCGCGTGTCTTCGAGCTC  
ACTGGCCGCAGCAAGAACAATCAGTAGAGCTGGAGGATGTAAAATTCCACCAGTGCCTGCGGCTCTCTCGCTTT  
GACAACGACCGCACCATCTCCTTCATCCCGCCTGATGGTGACTTTGAGCTCATGTCATACCGCCTCAGCACCCAG  
GTCAAGCCACTGATCTGGATTGAGTCTGTCAATTGAGAAGTTCTCCACAGCCGCGTGGAGATCATGGTCAAGGCC  
AAGGGGCAGTTTAAGAAACAGTCAGTGGCCAACGGTGTGGAGATATCTGTGCCTGTACCCAGCGATGCCGACTCC  
CCCAGATTCAAGACCAGTGTGGGCAGCGCCAAGTATGTGCCGGAGAGAAACGTCGTGATTTGGAGTATTAAGTCT  
TTCCCGGGGGGCAAGGAGTACTTGATGCGAGCCCACTTTGGCCTCCCCAGTGTGGAAAAGGAAGAGGTGGAGGGC  
CGGCCCCCATCGGGGTCAAGTTTGAGATCCCTACTTCACCGTCTCTGGGATCCAGGTCCGATACATGAAGATC  
ATTGAGAAAAGTGGTTACCAGGCCCTGCCCTGGGTTCGCTACATCACCCAGAGTGGCGATTACCAACTTCGTACC  
AGCTTAGAAGGGAGAAGAGATGGGGGCTTGAACACGGGGCTTCCTTACAGCCCCGGATGCAGATTTTAGAGGGAGG  
GCAGGTGCGGGCTGTGTGTCTGTGTGAGGGCAGGTCTGGACTTGGCAGTTTCTTGCTCCCAGCACCCGCCCC  
TTCCTCACCTCTTCCTTATTCCATAGGCTGGGAGAGAACTCTCTGCTTCCCTCGCCCTTGGAGCTTCCCCATC  
CCCCTGATTTTATATGAAGAAATAGAAGAGGGGCTTGAAGTCCCCCTCGCGAGTGCCTTCTTGCAATTACCTGCC  
TTAGCGGGTGTGCGGGTCCCTCCTTCACAGCCGCTGAGCCCAGAGGTCCCGCTGGCCCCCTCCTCTGAATTTAG  
GATGTCATTAAAAAGATGAATCTA

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**FIGURE 5242**

MSASAVFILDVKGKPLISRNYKGDVAMSKIEHFMPLLVQREEEGALAPLLSHGQVHFLWIKHSNLYLVATTSKNA  
NASLVYSFLYKTIEVFCEYFKELEEEESIRDNFVIVYELLDELMDFGFPQTDSKILQEYITQQSNKLETGKSRVP  
PTVTNAVSWRSEGIKYKKNEVFIDVIESVNLLVNANGSVLLSEIVGTIKLKVFLSGMPELRLGLNDRVLFELTGR  
SKNKSVELEDVKFHQCVRLSRFDNDRTISFIPPDGDFELMSYRLSTQVKPLIWIESVIEKFSHSRVEIMVKAKGO  
FKKQSVANGVEISVPVPSDADSPRFKTSVGS AKYVPERNVVIWSIKSFPGGKEYLMRAHFGLP SVEKEEVEGRPP  
IGVKFEIPYFTVSGIQVRYMKIIEKSGYQALPWVRYITQSGDYQLRTS

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**FIGURE 5243**

ATGGGGGACGAGCGGCCCTACTACTCGGGAAACACGGAACGCCACAGAAGTATGATCCCACTTTCAAAGGACCC  
ATTTACAATAGGGGCTGCACGGATATCATATGCTGTGTGTTCTCTGCTCCTGGCCATTGTGGGCTACGTGGCTGTA  
GGCATCATAGCCTGGACTCATGGAGACCTCGAAAGGTGATCTACCCCACTGACAGCCGGGGCGAGTTCTGCGGG  
CAGAAGGGGCACAAAAACGAGAACAAACCTATCTGTTTTATTTCAACATTGTGAAATGTGCCAGCCCCCTGGTT  
CTGCTGGAATTCCAATGTCCCACTCCCAAGATCTGCGTGAAAAATGCCCGACCGCTACCTCACGTACCTGAAT  
GCTCGCAGCTCCCGGGACTTTGAGTACTATAAGCAGTTCTGTGTTCTTGGCTTCAAGAACATAAAGGAGTGGCT  
GAGGTGCTTCAAGATGGTGACTGCCCTGCTGTCTCATCCCAAGCAACCTTGGCCCGGAGATGCTTCCCCGCT  
ATCCACGCCTACAAGGGTGTCTGTATGGTGGGCAATGAGACGACCTATGAGGATGGGCATGGCTCCCGGAAAAAC  
ATCACAGACCTGGTGGAGGGCGCCAAGAAAGCCAATGGAGTCCTAGAGGCGCGGCAACTCGCCATGCGCATATTT  
GAAGATTACACCGTCTCTTGGTACTGGATTATCATAGGCCTGGTCATTGCCATGGCGATGAGCCTCCTGTTTCATC  
ATCCTGCTTCGCTTCTTGGCTGGTATTATGGTCTGGGTGATGATCATCATGGTGATTCTGGTGCTGGGCTACGGA  
ATATTTCACTGCTACATGGAGTACTCCCGACTGCGTGGTGAGGCCGGCTCTGATGTCTCTTTGGTGGACCTCGGC  
TTTCAGACGGATTTCCGGGTGTACCTGCACTTACGGCAGACCTGGTTGGCCTTTATGATCATTCTGAGTATCCTT  
GAAGTCATTATCATCTTGCTGCTCATCTTTCTCCGGAAGAGAATTCTCATCGCGATTGCACTCATAAAGAAGCC  
AGCAGGGCTGTGGGATACGTATGTGCTCCTTGCTCTACCCACTGGTCACCTTCTTCTTGCTGTGCTCTGCTATC  
GCCTACTGGGCCAGCACTGCTGTCTTCTGTCCACTTCCAACGAAGCGGTCTATAAGATCTTTGATGACAGCCCC  
TGCCCATTTACTGCGAAAACCTGCAACCCAGAGACCTTCCCTCCTCCAATGAGTCCCGCCAATGCCCAATGCC  
CGTTGCCAGTTTCGCCTTCTACGGTGGTGAGTGGGGCTACCAACGGGGCCCTGCTGGGCCTGCAGATCTTCAATGCC  
TTCATGTTCTTCTGGTTGGCCAACCTTCGTGCTGGCGCTGGGCCAGGTCACGCTGGCCGGGGCCCTTTGCCTCCTAC  
TACTGGGCCCTGCGCAAGCCGGACGACCTGCCGGCCCTTCCCGCTCTTCTCTGCCTTTGGCCGGGGCGCTCAGGTAC  
CACACAGGCTCCCTGGCCTTTGGCGCGCTCATCCTGGCCATTGTGAGATCATCCGTGTGATACTCGAGTACCTG  
GATCAGCGGCTGAAAGCTGCAGAGAACAAAGTTTGCCAAGTGCTCATGACCTGTCTCAAATGCTGCTTCTGGTGC  
CTGGAGAAGTTTCATCAAAATTCCTTAATAGGAATGCCTACATCATGATTGCCATCTACGGCACCAATTTCTGCACC  
TCGGCCAGGAATGCCTTCTTCTGCTCATGAGAAACATCATCAGAGTGGCTGTCTGGATAAAGTTACTGACTTC  
CTCTTCTGTTGGGCAAACTTCTGATCGTTGGTAGTGTGGGGATCCTGGCTTCTTCTTCTTCAACCCACCGTATC  
AGGATCGTGCAGGATACAGCACCACCCCTCAATTATTACTGGGTTCTTACTGACGGTGATCGTTGGCTCCTAC  
TTGATTGCACACGGTTTCTTACGCTCTATGGCATGTGTGTTGGACACGCTGTTCTCTGCTTCTTGGAGGACCTG  
GAGAGGAATGACGGCTCGGCCGAGAGGCCTTACTTCATGTCTTCCACCCTCAAGAACTCTTGAACAAGACCAAC  
AAGAAGGCAGCGGAGTCCTGA

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**FIGURE 5244**

GACCGGGGGCGAGCGGGCGGGCGGGCAGGCGCGCGCGGGGAGGTGCGGGAACACGTGACCGGCTGAAGCCCCGC  
CCCCTTTGACGCCGCGTTGCGCCTCGACGCAGGCCCAACCCAAATGGGAGGGAGGGGCGAAAAAGAGATAAGGGGG  
GGGCTGAGGGGGTGGGCGTGAGTTGCACGTGGTGCAAGCGGGAGTGTTTGCCTGCGTAGTCACGTGACTTCGGCA  
CCTTTCCCTCCGCTTTTCGATAGGTTGCTCCATCATGTGACAATGGCGAATTCGCGGTTTCCTTCGCCATCTGAC  
AACTTTTGGCGCCTTCCCTTTGCGTACTGGGAGTCCTCCATCACGTGACGAGGGGCACGCTCTGTTTTTCGTAA  
GGCGTTTTTTGAGCGGCCATTACCACGTGATGCAAGGCAAGCGTCAGAGGCGGAGCCTCCCTACGGCTGCGACAT  
TTTGGCGCTGCGCGGCCCATCTTACGCCCGTCGCCCTGAGTACGTTAGCGGAAATGGCTCCGAGAGGCTTTGA  
CGCATGTGTACCTTTTTAGTGGCGGTATCTCGGCCGGGGATTTTCGGGCTCCAGTGAGGTTGGCTATGCTCACCC  
CATCTCCCTTGAGAGGCACAGAAGGTTAGAGATGTGTGCGAGGAACGGCCAGGTCCAGCGTCTCCTCGTTGCTGC  
CCCTTGAGCCCGGGACCGCGCCAATGCGCGCCCGGGTTCTTGGGTTCTTTCGTCCCGCAGACCTGCCTTGGTGT  
GGCGTCCCTGGGCGGTAGCTTCCGAAGGCTGCAGCCGACCTGGTTCGGGCTCCTTAGCCCGCCTTCCCTTCCCC  
CATTGACAGATGGAGAACTGAGGCCCAGGCCAAAAAATATCTCACTAGAGGGCTCACCGCCATTTCTTGAAAA  
ATTGGGGCTGGGACTCAACGGACGCTCGTCCAGCAGCAGCGCGGAGCTCCGAAGTAAAGGCGCCCGTGACCGAGT  
GCTTTGCTCTTACAAGCGTGGTGTCTTGAATGCTTCCAGCGCCTTATGAGCCCCCGATGTACAATCTGTGCT  
TAATAAACCCCACTGTCTTCCAGGGTCAGGTTGGCCATCCGCAGGCGTAGTTGCTAGGAAGGTTTGACAGATGT  
CCGCTGTGTGATTACAGACGTTCCAGGATTGGAGCAAGAGAGCAAGGAAGGCCAGGCGCGGTGGCTCACGTTT  
GTAATCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGAGTTTCGAGACCAGCCTGGCCAGCATG  
GTGAAACCCCGTCTCTACTAAAAATACAAAAGAAAATTAGCCGGGTGTGGTGGCACATGCCTGTAGTCCACCTA  
CTTGGGAGGCTGAGGCAGGAGAATTGTTTGACCTGGCAGGCGGAGGTTGCAGTGAGCCGAGATTGCGCCACTGCA  
CTCCAGTCTGGGCGACAGAGCGAGACTCTGTCTCAGAAAAAAAAGAGCAAGGAGGTGTTGAAAATGGGTTTCC  
TGGCTGGGCGTGGTGGCTCACGCTTGTATCCAGCACTTTGGGAAGCTGAGGTGGGCGGATCACTTGAGGTACG  
GAGTTTGAGACCAGCCTGGCCAACATGGTGAAACACCGTCTCCACTAAAAATAGAAAAATTAAGTGGGTGTGGTG  
GAGGGCGCCTGTAAATCCAGCTAATCAGGAAGCTGAGACAGGAGGATCGCTTGAACCCAGGAGGCGGAGGTTGCA  
GTGAGCCGAGATTGCTCCATTGCACTCCAGCCTGGGCGATAGAGTGAGACTCAGCCTCAAAAAAAAAAAAAAAAA  
AAAATTCGCCAGGTGTGGTGGTGTGCGCCTATAATCCAGCTACTCAGGAGGCAGAGGCACAAGAATGGCTTGAA  
TCACTTGAACCTGGGAGGCAGAGGTTACAATGAGCCGAGATGGCACCACTGCACTCCAGCCTGGGCGACAGAGCG  
AGACTCCGACTTCCCATCTTAAAAAAAAAAAAAAAAAAAAAAGAGTGTAAAGATGTGATTATGTGGCAGGGG  
GTAAGGGTTAAAAAGAAAAACAAGAACAGTTTTCTCTGCTTAGCCAGCTTACTTCAAGGACAGTTATAACACTG  
AAAAGTCGAGGCCAAAGGAATGGGCTCCAGACAGCCTCCTCCGGAGCAAAGTTGAAAAGAAAAATTCCTTTACTG  
TCTCTCCTTTTCTGAACCATTAATATGACTGTTTGCCAATGGTTGTATTTAGTAAGATTGTAGACTCTGTTTT  
TCTTTTGACACAGCTGCAAGGCCAACAGCTGTGCAAAGCCACAAGTTATGCTAAGTCAGCAGTTATGCTATAGAT  
TACATGACCTGTGACTGTATCATTAAGTCTTTGTTTTGCTTCTGTAAAGTTGCCTATAAAACCACTCAGT  
CTTTGTTCAATGGTCAGCTTTTCAGATACAAATCCACTGAGCCGGTGTACATCTAAATAAATCCTCCTGTTTCCC  
GT



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**FIGURE 5245**

MAPLHSSLGDRARLRRLPILKKKKKKKKCKDVIMWQGVRVKKKTRTSFPLLSQLTSRTVITLKSRGQRNGLQTAS  
SGAKLKRKIPLLSLLF

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**FIGURE 5246**

GTTAGAGCAGAGGAGGTCCCAGATACCAAGTGGCGCCTCCAGGAAAGGCTGGGAGAAGAGGTGGCCTGGAGTAC  
CCCCAGATCCCAGCAGCGCACACAGTGGAGGGATGAGGATGGATGGGTCTTAACCCCTGATTTTGATGGGATGTG  
TTCATGTCCTATCTCCTCTCCTGGACACATTAAGGGGTGGGACAAGAAGAGACTCCTGTGAGATCAGCAGACCT  
CGTGTTTAAGGAGAGAATGCCTGCCTGCAACACTCATGGAGAGGGACACTTCCTGGCCCCACCTGCTAAATACCT  
CCAAACTCTGGGCAGGCGCCTGCATTCTCAACACAGGACTTCCCTTAACAGTTTCCGGATCAGTGACCACCACCA  
CGTTCAGGTTTCTGAATGCAGACCCACCACGAGGGATGGATTCCACCCGCCCGCCCTGCTGCAGATACATGCGGC  
ACAGCAGGCACGTGCCTGGAGAGAACAGCTCCTGAGCACAGCACCCCTTGGAGCCCTCACCCCGCTCACGATCCTC  
ACCACTGCTGATGATGCCGTCATGCTGCTGGCCTGAGACAGTATCCCAGCTACAACAGGACGACACCGGGTTTACG  
GAATATGTGGCTATCACCTTGAGCACTGACAGTGGCCTTCCAGGCTAGTTGCCCTTCCAAACGCAGGTAGCCGACC  
TGCAGGAGGGCCTACAAACGGGCCCAGCAAGAGCTGGGCAACAGCTGGCTTGTGAAATGAGACACCTTGACCAAT  
ATGCTTTGGGTGGACGGTCTCCTACATGTTTCACTGGAGGCCACCAGGAGCATCCATGAGCGGGGAAGGGGTCCAC  
ACCCTTACATGGCAAGTTGATACGATGGGGTGCTTGGTGGATGGGCCATGGAGGTCCGTGAGCTGGAAGTGGGCA  
CACGCCATCCCAGAGGGCTCAGGATGCCCCAGGAAGGAAAGAAGGGCAACAGACTACACGATTGGACGTGTGTGG  
TTGACTGGGATGAAGTTGGAGGGAGGGGCAGGGCCTTGAGGGGATTGGTACTGATCCCAGGGAGGAAGTGTGG  
GGCTTCATGAAGTAGGATGAAAGGAGGCCCCCTGAGCCATGACAAGGGGCACATCCAGGATTTCCGCCACCCTGAA  
TTTAGTAGAGCTAGTAGGCCCTGGTCGTCACTCTGGGCAGGGATGCCGTCAGCCTTGAGGGTCGCCACCCACCTG  
TGTGTTGCCCTCTGTCTGGCAGGGAAACATACACCCCTTGTCTCACCACCAACCTTGCTTGTGTAGTCAGCAGG  
GCTGGCCCTGCCCAAGGACTCACTGCATGTACCCGGACCCCTAGGCCTGGCCTTTGCAGCATAGTTGGGAGCTT  
CTGGATTCCATCTGCACCTGTGAGCCCCATGCTGGCTGTGCACTGCGCGGGCCTGAGACTGCTGGATAACAATGTT  
GGGCAACAACCTCAGCCAGCCTGATGGCAGCCTCAGAGGCTTACTCTAACCCTATCCAGAATAAATGGAGACTTCA  
TGTGTT

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**FIGURE 5247A**

GACCGTGAGGCCGAGCCGGGAGCGGGCGTCTTGCCGAGGCCCGGGCGGGGAGCAACGGCTACAGACGCCGC  
GGGGCCAGGTCGTTGAGGGTCGGCGGGCGGGCAGGAGCGCAGGGCGCTCGGGCCGGGGCCGCCGGCCATGGG  
CAACCGCGGGATGGAAGAGCTGATCCCGCTGGTCAACAACTGCAGGACGCCCTCAGCTCCATCGGCCAGAGCTG  
CCACCTGGACCTGCCGAGATCGCTGTAGTGGGCGGCCAGAGCGCCGGCAAGAGCTCGGTGCTGGAGAACTTCGT  
GGGCGGGACTTCCTTCCCGCGGTTTCAAGTAATCGTCACCCGGCGGCCTCTCATTCTGCAGCTCATCTCTCAAA  
AACAGAACATGCCGAGTTTTTGCAGTCAAGTCCAAAAAGTTTACAGACTTTGATGAAGTCCGGCAGGAGATTGA  
AGCAGAGACCGACAGGGTCACGGGGACCAACAAAGGCATCTCCCAAGTGCCTCAACCTTCGAGTCTACTCGCC  
ACACGTGTTGAACCTGACCCCTCATCGACCTCCCGGTATCACCAAGGTGCCTGTGGGCGACAGCCTCCAGACAT  
CGAGTACCAGATCAAGGACATGATCCTGCAGTTCATCAGCCGGGAGAGCAGCCTCATTCTGGCTGTACGCCCCG  
CAACATGGACCTGGCCAACCTCGACGCCCTCAAGCTGGCCAAGGAAGTGCATCCCAAGGCCTACGGACCATCGG  
TGTCATCACCAAGCTTGACCTGATGGACGAGGGCACCAGCCAGGGACGTCTTGAGAACAAGTTGCTCCCGTT  
GAGAAGAGGCTACATTGGCGTGGTGAACCGCAGCCAGAAGGATATTGAGGGCAAGAAGGACATCCGTGCAGCACT  
GGCAGCTGAGAGGAAGTTCTTCTCTCCACCCGGCCTACCGGCACATGGCCGACCGCATGGGCACGCCACATCT  
GCAGAAGACGCTGAATCAGCAACTGACCAACCACATCCGGGAGTGCCTGCCGGCCCTACGTAGCAAACTACAGAG  
CCAGCTGCTGTCCCTGGAGAAGGAGGTGGAGGAGTACAAGAATTTCCGGCCGACGACCCACCCGCAAAACCAA  
AGCCCTGCTGCAGATGGTCCAGCAGTTTGGGGTGGATTTTGAAGAAGAGGATCGAGGGCTCAGGAGATCAGGTGGA  
CACTCTGGAGCTCTCCGGGGGCGCCCAATCAATCGCATCTTCCACGAGCGGTTCCCATTTGAGCTGGTGAAGAT  
GGAGTTTGACGAGAAGGACTTACGACGGGAGATCAGCTATGCCATTAAGAACATCCATGGAGTCAGGACCGGGCT  
TTTACCCCGGACTTGGCATTGAGGCCATTGTGAAAAAGCAGGTCGTCAAGCTGAAAGAGCCCTGTCTGAAATG  
TGTCGACCTGGTTATCCAGGAGCTAATCAATACAGTTAGGCAGTGTACAGTAAGCTCAGTTCTTACCCCGGTT  
GCGAGAGGAGACAGAGCGAATCGTCACCACTTACATCCGGGAACGGGAGGGGAGAACGAAGGACCAGATTCTTCT  
GCTGATCGACATTGAGCAGTCTTACATCAACACGAACCATGAGGACTTCATCGGGTTTGCCAATGCCAGCAGAG  
GAGCACGCAGCTGAACAAGAAGAGAGCCATCCCCAATCAGGGGGAGATCCTGGTGATCCGCAGGGGGCTGGCTGAC  
CATCAACAACATCAGCCTGATGAAAGGCGGCTCCAAGGAGTACTGGTTTGTGCTGACTGCCGAGTCACTGTCTCTG  
GTACAAGGATGAGGAGGAGAAAGAGAAGAAGTACATGCTGCCTCTGGACAACCTCAAGATCCGTGATGTGGAGAA  
GGGCTTCATGTCCAACAAGCAGTCTTCGCCATCTTCAACACGGAGCAGAGAAACGTCTACAAGGACCTGCGGCA  
GATCGAGCTGGCCTGTGACTCCAGGAAGACGTGGACAGCTGGAAGGCCTCGTTCTCCGAGCTGGCGTCTACCC  
CGAGAAGGACCAGGCAGAAAACGAGGATGGGGCCAGGAGAACACCTTCTCCATGGACCCCCAACTGGAGCGGCA  
GGTGGAGACCATTGCAACCTGGTGGACTCATACGTGGCCATCATCAACAAGTCCATCCGCGACCTCATGCCAAA  
GACCATCATGCACCTCATGATCAACAATACGAAGGCCTTCATCCACCACGAGCTGCTGGCCTACCTATACTCCTC  
GGCAGACCAGAGCAGCCTCATGGAGGAGTCGGCTGACCAGGCACAGCGGCGGGACGACATGCTGCGCATGTACCA  
TGCCCTCAAGGAGGCGCTCAACATCATCGGTGACATCAGCACCAGCACTGTGTCCACGCCTGTACCCCGCCTGT  
CGATGACACCTGGCTCCAGAGCGCCAGCAGCCACAGCCCCACTCCACAGCGCCGACCGGTGTCCAGCATACCCC  
CCCTGGCCGGCCCCAGCAGTGAGGGGCCCCACTCCAGGGCCCCCCTGATTCTGTTCCTGTTCCCGTGGGGGCGAGC  
CTCCTTCTCGGCGCCCCAATCCCATCCCGGCCTGGACCCAGAGCGTGTGTTGCCAACAGTGACCTCTTCCCAGC  
CCCGCCTCAGATCCCATCTCGGCCAGTTTCGGATCCCCCAGGGATTCCCCCAGGAGTGCCAGCAGAAGACCCCC  
TGCTGCGCCAGCCGGCCACCATTATCCGCCAGCCGAGCCATCCCTGCTCGACTAGGCCTCGAGGGGGCGTG  
CTCTCGGGGGGCGCTACGCAACCCGCGGCGCAGGAGCTTCAGTGGTCTGGGGCCCTCCGCGGCCCTATGCTGGG  
ACCAGGCTCCAGTGGGCAGCCCTGGCCTCTTCCCTAACGCTGGCCCCGGTCCAGGGCCGGCCCCCTGTGCTGGC  
TGGACACCGCACTGCGCAAAGGGGCGCTGGAGCTCCAGGCAGGGGGCGCTGGGGTGTGCACTTTGGGGGATGGA  
GTCTCAGGGTGGCAGAGGGGGGACCAGAACCCTTGACACCATCCTGAATGAGGGGTCCAGCCTGGGGGGGACTCT  
ACCAAGGTCTTCTTGGGCTGGGAAAGCCCATGTAGGGCAGGCCTTCTATAAGTGCGGGCACCAAGGGCGCCTACA  
TCCCCAGGCCTTGCTGGGGTGCAGGGGTATATCAACTTCCATTAGCAGGAGCTCCCCAGCGGCAAGCCTGGCCC  
AGTGGGCTCGGTAGTGCCAGCTGGCAGGCCTGAGGTGTACATAGTCCTTCCCGGCCATATTAACCACACAGCCT  
GAGCCTGGCCAGCCTCGGCTGCCAGAGGTGCCTTTGCTAGGCCCGGAGCCGTTGGCCCGGGCGGCCCTTGCCCT  
ATTCTCTCCTCCTCCTCCTTGGGTCCCCCAGGTGGCTGGGCTTGGGCTATGTGGGTGGTGGTGGCGGGGG  
TCTTGGGGGCGCTCTCAGCTCCCGCCATGCCTCCCTGATGGGTGGGCGCAGGGCGGCTCTCTCTGAGGAGACCT  
CACCCACTCCTCGCTCAGTTTGACCACTGTAAGTGCTGCACTCTGTATTCTATTAAATAAACTAAATAAAGGGA

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**FIGURE 5247B**

AGACGCTGCTGGTG

[illegible]

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**FIGURE 5249**

MAAAAAVGPAGGAGSAVPGGAGPCATVSVFPGARLLTIGDANGEIQRHAEQQALRLEVRAGPDSAGIALYSHE  
DVCVFKCSVSRETECSRVGKQSFIIITLGCNSVLIQFATPNDFCSFYNILKTCRGHTLERSVFSERTEESSAVQYF  
QFYGYLSQQQNMMDYVRTGTYQRAILQNHTDFDKIVLDVGCSSGILSFFAAQAGARKIYAVEASTMAQHAEVL  
VKSNNLTDRIVVIPGKVEEVSLPEQVDIIISEPMGYMLFNERMLESYLHAKKYLKPSGNMFPTIGDVHLAPFTDE  
QLYMEQFTKANFWYQPSFHGVDSLALRGAADVDEYFRQPVDTFDIRILMAKSVKYTVNFLEAKEGDLHRIEIPFK  
FHMLHSGLVHGLAFWFDVAFIGSIMTVWLSTAPTEPLTHWYQVRCLFQSPLFAKAGDTLSGTCLLIANKRQSYDI  
SIVAQVDQTGSKSSNLDDLKNPFFRYTGTPSPPPGSHYTSPSENMWNTGSTYNLSSGMAVAGMPTAYDLSSVIA  
SGSSVGHNNLIPLANTGIVNHTHSRMGSIMSTGIVQGSSGAQGS GGGSTSAHYAVNSQFTMGGPATSMASPM SIP  
TNTMHYGS

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**FIGURE 5250**

GGCACGAGGGGATGTTGCTGTCAGGTCTGAGTCGGTTGGAGTCTGACGGGTAGGCGAGACGCGCAGGCGCAGAGA  
GCCCCAGCCACGCCGGCCAGGTGGCCTCAGCGAGGGATGCGGAGACGCCCTGAACGACCATGGCATCGGCCGA  
CGAGCTGACCTTCCATGAATTCGAGGAGGCCACTAATCTTCTGGCTGACACCCAGATGCAGCCACCACCAGCAG  
AAGCGATCAGCTGACCCACAAGGGCACGTGGCTGTGGCCGTGGGCTCAGGTGGCAGCTATGGAGCCGAGGATGA  
GGTGGAGGAGGAGAGTGACAAGGCCGCGCTCCTGCAGGAGCAGCAGCAGCAGCAGCAGCCGGGATTCTGGACCTT  
CAGCTACTATCAGAGCTTCTTTGACGTGGACACCTCACAGGTCTGGACCGGATCAAAGGCTCACTGCTGCCCG  
GCCTGGCCACAACTTTGTGCGGCACCATCTGCGGAATCGGCCGGATCTGTATGGCCCCCTTCTGGATCTGTGCCAC  
GTTGGCCTTTGTCTGGCCGTCACCTGGCAACCTGACGCTGGTGCTGGCCAGAGGAGGGACCCCTCCATCCACTA  
CAGCCCCCAGTTCCACAAGGTGACCGTGGCAGGCATCAGCATCTACTGCTATGCGTGGCTGGTGCCCTGGCCCT  
GTGGGGCTTCCTGCGGTGGCGCAAGGGTGTCCAGGAGCGCATGGGGCCCTACACCTTCCTGGAGACTGTGTGCAT  
CTACGGCTACTCCCTCTTTGTCTTCATCCCCATGGTGGTCTGTGGCTCATCCCTGTGCCTTGGCTGCAGTGGCT  
CTTTGGGGCGCTGGCCCTGGGCCTGTCAGCCGCCGGGCTGGTATTACCCCTCTGGCCCGTGGTCCGTGAGGACAC  
CAGGCTGGTGGCCACAGTGCTGCTGTCCGTGGTCTGTCTCCACGCCCTCCTGGCCATGGGCTGTAAGTTGTA  
CTTCTTCCAGTCGCTGCCTCCGGAGAACGTGGCTCCTCCTCCCAAATCACATCTCTGCCCTCAAACATCGCGCT  
GTCCCTACCTTGCCGCAGTCCCTGGCCCCCTCCTTAGGAAAGGCCCGGGTCCCACAGGCAACACCTAAGTGGACCA  
ACCCCTCTGCCTGTCTGCCCCCAGACGATGACTGAAGGCTCCTTTGACACCTTGAGATGATTCTGCTACTTTC  
CAGACTTTTCTTACAAAGCAAACACTTTTATTTTCTATGCAAAGGTGATTCAGAGAATTTATATAAAGGCGGGCG  
AGGGGCAGCCGAGCAGGGAGCTTTGGGACAGGGCTGGGGCCCCCATATCCCCCGGGCCACCTGCTTTCCCTCC  
TATGGCTCCCCTGGAACAGGAGGGAGAGCCAAGGGGGCGGCCAGCCTGGACAGCGCCGCTCCTGCCTGGGTGC  
ACACACGGCGGGCCTGAGCTCCAGCATCTGAGTTTGGGGGTATGAGAAACAGGGGAGCAGAAGGAGAAGAAAAC  
GCCTGTGCTGCAA

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**FIGURE 5251**

MASADELTFHEFEEATNLLADTPDAATTSRSDQLTPQGHVAVAVGSGGSYGAEDEVEEESDKAALLQEQQQQQQP  
GFWTFSYYQSFFDVDTSQVLDRIKGSLLPRPGHNFVRHHLRNRPDLYGPFWICATLAFVLAVTGNLTLVLAQRRD  
PSIHYSPPQFHKVTVAGISIIYCYAWLVPLALWGFWRKGVQERMGPYTFLETVCIIYGYSLFVFIPMVVLWLIPVP  
WLQWLF GALALGLSAAGLVFTLWPFVREDTRLVATVLLSVVLLHALLAMGCKLYFFQSLPPENVAPPPQITSLP  
SNIALSPTLPQSLAPS



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**FIGURE 5252**

GAAGAGACTCCCGGGCTCTTAACGTCGGGTATCAGGAGTTTCTTCCCGGAGCAAGGACCCCAAGACGGAAGAGG  
ATGGCCGCGGCGGCTCTGAGGAGATTTTGGTCCCGGCGCCGCGCAGAGGCGGGCGACGCGGTAGTGGCGAAGCCG  
GGAGTGTGGGCGCGGCTGGGGTCTGGGCCCCGCGCTGCTCCGGGACTACGCCGAGGCCTGCAGGGACGCTTCG  
GCGGAGGCTAGGGCCCCGGGGCGCGCCGCTGTGTATGTGGGTCTGCTGGGCGGCGGGCGGCCTGCTTCACG  
CTGGCGCCACAGCGAGGGTGCCCTTCGAGGAGGCGCTGCTGGAGGCGTCGGGGACCCTCCTGCTGCTGGCGCCGGCC  
ACCCGCAACCGCGAGTCCGAAGCCTTCGTGCAGAGGCTGCTCTGGCTGCGGGGCCGTGGCCGCTGCGCTACGTC  
AACCTGGGGCTCTGCTCGCTGGTGTACGAGGCGCCCTTCGACGCCAGGCCAGCCTCTACCAGGCGCGTTGCCGC  
TACCTGCAGCCCCGCTGGACCGACTTCCCGGCCGGGTCTGGACGTGGGCTTCGTGGGTGCTGGTGGGTGCTG  
GGGGCCTGGATGCGCGACTGCGACATCAACGACGACGAATTCCTGCACCTGCCGGCGCATTTGCGGGTGGTCGGG  
CCCCAGCAGCTGCATTCCGAGACCAACGAGCGGCTCTTCGATGAGAAGTACAAGCCTGTCGTGCTCACCACGAT  
CAGGTGGACCAGGCGCTGTGGGAGGAGCAGGTCTTGAGAAGGAGAAGAAGGACAGGCTCGCCCTGAGCCAGGCC  
CACTCGCTGGTGCAGGCGGAGGCCCGAGATTGAAACCCTGAGGCCCCGAGTCCTGGCAAACCTGCTTGCTGGGG  
TGGTGCAGTTCTGAGTGTGCCTCACCTGCAGAACAGCTGAGACAGATGATGTGCAAAGTGTCTTCTCACTGGATT  
TGCACAAGTTTGGGGAGCCTTTCTGCCCCCGTCTTTGTTCTTTATTAGCTGAAGCTAATTCAGAGCCACCTGGG  
TCCGGGAGTTGGGGACAGCAGAACGACTTGACACATGTTTCATCACTGGCAGAGCTGGTCATGAGCCTTTATATA  
AGCCTTTTTTCATCGGGCCTCAGAGGCCCTCCTTAAGGAGGTACCACATTGGTCAGCTGACTTGCAAACCTCTTCTA  
AGGCCACTTAGATTTTCTTTTCAAGTTTGGGTTGTGGCCTGGCATGGTGATGTCTGTAATCCCAGCAGTTTGCA  
AACTGAGGCAAGAGAATCGCTTGAGGCCAGGAGTTTGAGGCCAGCTAGAGTGACATAGCAAGACTCCGATGCTAC  
AAAAAAGAATAATAATAGTAATTAATAAATAAAATTTGAGCTG

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**FIGURE 5253**

MAAAALRRFWSRRRAEAGDAVVAKPGVWARLGSWARALLRDYAEACRDASAEARARPGRAAVYVGLLGGAACFT  
LAPSEGAFFEEALLEASGTLLLLAPATRNRESEAFVQRLWLGRGRRLRYVNLGLCSLVYEAPFDAQASLYQARCR  
YLQPRWTDFFPGRVLDVGFVGRWWVLGAWMRDCDINDEFLLHLPALHVRVVGPPQLHSETNERLFDEKYKPVVLTDD  
QVDQALWEEQVLQKEKKDRLALSQAHSIVQAEAPR

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FIGURE 5254A

CGCCGCGGTGCTGAGGGGGAGGGGAGCCGGCGAGCGCGCGCAGCGGGGGCGCGGGTGCGCGCGGTGTGTGTGA  
AGGGGGGGCGGTGGCCGAGGCGGGCGGGCGCGCGCGAGGCTTCCCTCGTTTGGCGGCGGCGCGGCTTCTTT  
GTTTCGTGAAGAGAAGCGAGACGCCCATTCTGCCCCGGCCCCGCGGAGGGGCGGGGAGGCGCCGGGAAGTC  
GACGGCGCGGGCGGCTCCTGCAGGAGGCCACTGTCTGCAGCTCCCGTGAAGATGTCCACTCCAGACCCACCCCTG  
GGCGGAACCTCTCGGCCAGGTCTTCCCCGGGCCCTGGCCCTTCCCTGGAGCCATGCTGGGCCCTAGCCCGGGT  
CCCTCGCCGGGCTCCGCCACAGCATGATGGGGCCAGCCAGGGCCGCCCTCAGCAGGACACCCCATCCCCACC  
CAGGGGCTGGAGGGTACCCTCAGGACAACATGCACCAGATGCACAAGCCCATGGAGTCCAATGCATGAGAAGGGC  
ATGTGCGACGACCCGCGCTACAACCAGATGAAAGGAATGGGGATGCGGTGAGGGGGCCATGCTGGGATGGGGCCC  
CCGCCAGCCCATGGACCAGCACTCCCAAGGTTACCCCTCGCCCTGGGTGGCTCTGAGCATGCCTCTAGTCCA  
GTTCCAGCCAGTGGCCCGTCTTCGGGGCCCCAGATGTCTTCCGGGCCAGGAGGTGCCCCGCTGGATGGTGCTGAC  
CCCCAGGCTTGGGGCAGCAGAACCAGGGGCCAACCCCATTTAACCAGAACCAGCTGCACCAGCTCAGAGCTCAG  
ATCATGGCCTACAAGATGCTGGCCAGGGGGCAGCCCTCCCCGACCACCTGCAGATGGCGGTGCAGGGCAAGCGG  
CCGATGCCCCGGATGCAGCAGCAGATGCCAACGCTACCTCCACCCTCGGTGTCCGCAACAGGACCCGGCCCTGGC  
CCTGGCCCTGGCCCCGGCCCGGTCCCGGCCCGGCACCTCCAAATTACAGCAGGCCCTCATGGTATGGGAGGGCCC  
AACATGCCTCCCCAGGACCTCGGGCGTGCCCCCGGGATGCCAGGCCAGCCTCCTGGAGGGCCTCCCAAGCCC  
TGGCCTGAAGGACCCATGGCGAATGCTGCTGCCCCACGAGCACCCCTCAGAAGCTGATTCCCCCGCAGCCCAACG  
GGCCGCCCTTCCCCCGCGCCCCCTGCCGTCCCACCCGCCGCTCGCCCGTGATGCCACCCGACAGCCAGTCCCCC  
GGGCAGCCGGCCAGCCCGCGCCCATGGTGCCACTGCACCAGAAGCAGAGCCGCATCACCCCATCCAGAAGCCG  
CGGGGCTCGACCCTGTGGAGATCCTGCAGGAGCGCGAGTACAGGCTGCAGGCTCGCATCGCACACCGAATTCAG  
GAACTTGAAAACCTTCCCGGTCCCTGGCCGGGGATTTCGGAACCAAGCGACCAATTGAGCTCAAGGCCCTCAGG  
CTGCTGAACTTCAGAGGCAGCTGCGCCAGGAGGTGGTGGTGTGCTATGCGGAGGGACACAGCGCTGGAGACAGCC  
CTCAATGCTAAGGCTACAAGCGCAGCAAGCGCCAGTCCCTGCGCGAGGCCCGCATCACTGAGAAGCTGGAGAAG  
CAGCAGAAGATCGAGCAGGAGCGCAAGCGCCGGCAGAAGCACCAGGAATACCTCAATAGCATTCTCCAGCATGCC  
AAGGATTTCAAGGAATATCACAGATCCGTACAGGCAAAATCCAGAAGCTGACCAAGGCAGTGGCCACGTACCAT  
GCCAACACGGAGCGGGAGCAGAAGAAAGAGAACGAGCGGATCGAGAAGGAGCGCATGCGGAGGCTCATGGCTGAA  
GATGAGGAGGGGTACCGCAAGCTCATCGACCAGAAGAAGGACAAGCGCCTGGCCTACCTCTGCAGCAGACAGAC  
GAGTACGTGGCTAACCTCACGGAGCTGGTGCGGCAGCACAAGGCTGCCAGGTGCGCAAGGAGAAAAAGAGAA  
AAGAAAAAGAAGAGGCAGAAATGCAGAAGGACAGACGCTGCCATTGGGCCGGATGGCGAGCCTCTGGACGAG  
ACCAGCCAGATGAGCGACCTCCCGGTGAAGGTGATCCACGTGGAGAGTGGGAAGATCCTCAGGACACAGATGCC  
CCCAAGCCGGGCAGCTGGAGGCCCTGGCTCGAGATGAACCCGGGTATGAAGTAGCTCCGAGGTCTGATAGTGAA  
GAAAGTGGCTCAGAAGAAGAGGAAGAGGAGGAGGAGGAAGAGCAGCCGAGGCAGCAGCCTCCACCCCTGCC  
GTGGAGGAGAAGAAGAGATTCCAGATCCAGACAGCGATGACGTCTCTGAGGTGGACGCGCGGCACATCATTGAG  
AATGCCAAGCAAGATGTGATGATGAATATGGCGTGTCCAGGCCCTTGACGTGGCCTGCAGTCTTACTATGCC  
GTGGCCCATGCTGTCACTGAGAGAGTGGACAAGCAGTCAGCGCTTATGGTCAATGGTGTCTCAAACAGTACCAG  
ATCAAAGGTTTGGAGTGGCTGGTGTCCCTGTACAACAACCTGAACGGCATCCTGGCCGACGAGATGGGCCTG  
GGGAAGACCATCCAGACCATCGCGCTCATCAGTACCTCATGGAGCACAAACGCATCAATGGGCCCTTCCCTATC  
ATCGTGCTCTCTCAACGCTGTCCAAGTGGGCGTACGAGTTTGACAAGTGGGGCCCCCTCCGTGGTGAAGGTGTCT  
TACAAGGGATCCCCAGCAGCAAGACGGGCTTTGTCCCCAGCTCCGGAGTGGGAAGTTCAACGTCTTGCTGACG  
ACGTACGAGTACATCAAAAGACAAGCACATCCTCGCCAAGATCCGTTGGAAGTACATGATTGTGGACGAAGGT  
CACCGCATGAAGAACCACCACTGCAAGCTGACGCAGGTGCTCAACACGCACTATGTGGCACCCCGCCCTGCTG  
CTGACGGGCACACCGCTGCAGAACAGCTTCCCGAGCTCTGGGCGCTGCTCAACTTCTGTGCCCACCATCTTC  
AAGAGCTGCAGCACCTTCGAGCAGTGGTTTAACGCACCCCTTGCCATGACCGGGGAAAAGGTGGACCTGAATGAG  
GAGGAAACCATTTCTCATCATCCGGCGTCTCCACAAAGTGCTGCGGCCCTTCTGTCTCCGACGACTCAAGAAGGAA  
GTGAGGCCCCAGTTGCCGAAAAGGTGGAGTACGTATCAAGTGCGACATGTCTGCGCTGCAGCGAGTGTCTTAC  
CGCCACATGCAGGCCAAGGGCGTGTGCTGACTGATGGTCCGAGAAGGACAAGAAGGGCAAAGGCGGCACCAAG  
ACCTGATGAACACCATCATGCAGCTGCGGAAGATCTGCAACCACCCCTACATGTTCCAGCACATCGAGGAGTCC  
TTTTCCGAGCACTTGGGGTTCACTGGCGGCATTGTCCAAGGGCTGGACCTGTACCGAGCCTCGGGTAAATTTGAG  
CTTCTTGATAGAATTCTTCCCAAACCTCCGAGCAACCAACCAAAAGTGCTGCTGTCTGCCAAATGACCTCCCTC

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**FIGURE 5254B**

ATGACCATCATGGAAGATTACTTTGCGTATCGCGGCTTTAAATACCTCAGGCTTGATGGAACCACGAAGGCGGAG  
GACCGGGGCATGCTGCTGAAAACCTTCAACGAGCCCGGCTCTGAGTACTTCATCTTCCTGCTCAGCACCCGGGCT  
GGGGGGCTCGGCCTGAACCTCCAGTCGGCAGACACTGTGATCATTTTTGACAGCGACTGGAATCCTCACCAGGAC  
CTGCAAGCGCAGGACCGAGCCACCGCATCGGGCAGCAGAACGAGGTGCGTGTGCTCCGCCTCTGCACCGTCAAC  
AGCGTGGAGGAGAAGATCCTAGCTGCAGCCAAGTACAAGCTCAACGTGGACCAGAAGGTGATCCAGGCCGGCATG  
TTGACCAGAAGTCCTCCAGCCATGAGCGGCGCGCTTCTGCAGGCCATCCTGGAGCACGAGGAGCAGGATGAG  
AGCAGACACTGCAGCACGGGCAGCGGCAGTGCCAGCTTCGCCCACACTGCCCTCCGCCAGCGGGCGTCAACCCC  
GACTTGGAGGAGCCACCTCTAAAGGAGGAAGACGAGGTGCCCGACGACGAGACCGTCAACCAGATGATCGCCCGG  
CACGAGGAGGAGTTTGATCTGTTTCATGCGCATGGACCTGGACCGCAGGCGCGAGGAGGCCCGCAACCCCAAGCGG  
AAGCCGCGCTCATGGAGGAGGACGAGCTCCCTCGTGGATCATCAAGGACGACGCGGAGGTGGAGCGGCTGACC  
TGTGAGGAGGAGGAGGAGAAGATGTTTCGGCCGTGGCTCCCGCCACCGCAAGGAGGTGGACTACAGCGACTCACTG  
ACGGAGAAGCAGTGGCTCAAGGCCATCAGGAGGGCAGCGTGGAGGAGATCGAAGAGGAGGTCCGGCAGAAGAAA  
TCATCACGGAAGCGCAAGCGAGACAGCGACGCGGCTCCTCCACCCCGACCACCAGCACCCGCAGCCGCGACAAG  
GACGACGAGAGCAAGAAGCAGAAGAAGCGCGGGCGGCCGCTGCCGAGAACTCTCCCCTAACCCACCCAACTC  
ACCAAGAAGATGAAGAAGATTGTGGATGCCGTGATCAAGTACAAGGACAGCAGCAGTGGACGTCAGCTCAGCGAG  
GTCTTCATCCAGCTGCCCTCGCGAAAGGAGCTGCCCCGAGTACTACGAGCTCATCCGCAAGCCGTGGACTTCAAG  
AAGATAAAGGAGCGCATTCGCAACCACAAGTACCGCAGCCTCAACGACCTAGAGAAGGACGTATGCTCCTGTGC  
CAGAACGCACAGACCTTCAACCTGGAGGGCTCCCTGATCTATGAAGACTCCATCGTCTTGCACTCGGTCTTACC  
AGCGTGCAGCAGAAAATCGAGAAGGAGGATGACAGTGAAGGCGAGGAGAGTGAGGAGGAGGAAGAGGCGAGGAG  
GAAGGCTCCGAATCCGAATCTCGGTCCGTCAAAGTGAAGATCAAGCTTGGCCGGAAGGAGAAGGCACAGGACCGG  
CTGAAGGGCGGCCGGCGGCGCCGAGCCGAGGGTCCCGAGCCAAGCCGGTCTGTGAGTGACGATGACAGTGAGGAG  
GAACAAGAGGAGGACCGCTCAGGAAGTGGCAGCGAAGAAGACTGAGCCCCGACATTCCAGTCTCGACCCCGAGCC  
CCTCGTTCAGAGCTGAGATGGCATAGGCCTTAGCAGTAACGGGTAGCAGCAGATGTAGTTTCAGACTTGGAGTA  
AACTGTATAAACAAGAAATCTTCCATATTTATACAGCAGAGAAGCTGTAGGACTGTTTGTGACTGGCCCTGTC  
CTGGCATCAGTAGCATCTGTAACAGCATTAACTGTCTTAAAGAGAGAGAGAGAATTCCGAATTGGGGAACACA  
CGATACCTGTTTTCTTTTCCGTTGCTGGCAGTACTGTTGCGCCGAGTTTGGAGTCACTGTAGTTAAGTGTGGA  
TGCATGTGCGTCACCGTCCACTCCTCCTACTGTATTTTATTGGACAGGTCAGACTCGCCGGGGGCCCGGCGAGGG  
TATGTCACTGTCAGTGGATGTCAAACAGTAATAAATTAACCAACAACAAAACGCA

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## FIGURE 5255

MSTPDPPLGGTPRPGPSPGPGSPGAMLGPSPGSPGSAHSMGPPSPGPPSAGHP IPTQPGGGYPQDNMHQMHP  
MESMHEKGMSDDPRYNQMKGMGRSGGHAGMGPPSPMDQHSQGYPSPLGGSEHASSVPASGPSSGPQMSSGPG  
GAPLDGADPQALGQQNRGPTFFNQNLHQLRAQIMAYKMLARGQPLPDHLQMAVQGKRPMFPMQMQMPTLPPPSV  
SATGPGPGPGPGPGPGPAPPNYSRPHGMGGPNMPPPGPSGVPPGMPGQPPGGPPKPWPEGPMANAAAPTSTPQ  
KLIPPQPTGRPSAPPAPVPPAASPVMPPQTQSPGQPAQFAPMVPLHQKQSRITPIQKPRGLDPVEILQEREYRLQ  
ARIAHRIQELENLPGSLAGDLRTKATIELKALRLNFORQLRQEVVCMRRDTALETALNAKAYKRKRQSLREA  
RITEKLEKQQKIEQERKRRQKHQEYLSILOHAKDFKEYHRSVTGKIQLTKAVATYHANTEREQKKENERIEKE  
RMRRLMAEDEEGYRKLIDQKKDKRLAYLLQQTDEYVANLTTELVRQHKAQVAKKKKKKKKAENAEGQTPAIG  
PDGEPLDETSQMSDLPVKVIHVESGKILTGTDAPKAGQLEAWLEMNPGYEVAPRSDSEESGSEEEEEEEEEEQPQ  
AAQPPTLPVEEKKKIPDPDSDDVSEVDARHIIENAKQDVDEYGVSQLARGLQSYAVAHAVTERVDKQSALMV  
NGVLKQYQIKGLEWLVS LYNNNLNGILADEMGLGKTIQTIALITYLMEHKRINGPFLIIVPLSTLSNWAYEFDKW  
APSVVKVSYKGS PAARRAFVPQLRSGKFNVLLTTYEYIIKDKHILAKIRWKYMIVDEGHRMKNHHCKLTQVLNTH  
YVAPRRLLLTGTPLOKLPFWALLNFFLLPTIFKSCSTFEQWFNAPFAMTGEKVDLNEEETILIIIRRLHKVLRPF  
LLRRLKKEVEAQLPEKVEYVIKCDMSALQRVLYRHMQAQGVLLTDGSEKDKKGGTKTLMNTIMQLRKICNHPY  
MFQHIEESFSEHLGFTGGIVQGLDLYRASGKFELLDRIPLKLRATNHKVLLFCQMTSLMTIMEDYFAYRGFKYLR  
LDGTTKAEDRGMLLKTFFNEPGSEYFIFLLSTRAGGLGLNLQSADTVIIFDSDWNPHQDLQAQDRAHRIGQQNEVR  
VLRLLCTVNSVEEKILAAAKYKLNVDQKVIQAGMFDQKSSSHERRAFLQAILEHEEQDES RHCSTGSGSASFHTA  
PPPAGVNPDLLEPPLKEEDEVPDDETQMIARHEEEFDLFMRMDLDRRREEARNPKRKPRLMEEDLP SWI IKD  
DAEVERLTCEEEEEKMFGRGSRHRKEVDYSDSLTEKQWLKAIEEGTLEEIEEEVROKKSSRKRKRSDAGSSTPT  
TSTRSRDKDDESKKQKGRPPAEKLSNPNNLTKKMKKIVDAVIKYKDS SSGRQLSEVFIQLPSRKELPEYYEL  
IRKPVDFKKIKERIRNHKYRSLNDLEKDVMLLCQNAQT FNLEGLIYEDSIVLQSVFTSVRQKIEKEDDSEGEES  
EEEEEGEEGSESESRSVKVVIKLG RKEKAQDRLKGRRRPSRGRSAKPVVSDDDEEEQEEDRSGSGSEED

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**FIGURE 5256A**

GGCCCGAGTGCAATCGCGGGAAGCCAGGGTTTCCAGCTAGGACACAGCAGGTCGTGATCCGGGTCGGGACACTGC  
CTGGCAGAGGCTGCGAGCATGGGGCCCTGGGGCTGGAAATTGCGCTGGACCGTCGCCTTGCTCCTCGCCGCGGCG  
GGGACTGCAGTGGGCGACAGATGCGAAAGAAACGAGTTCCAGTGCCAAGACGGGAAATGCATCTCCTACAAGTGG  
GTCTGCGATGGCAGCGCTGAGTGCCAGGATGGCTCTGATGAGTCCCAGGAGACGTGCTTGTCTGTACCTGCAAA  
TCCGGGGACTTCAGCTGTGGGGCCGTGTCAACCGCTGCATTCCCTCAGTTCTGGAGGTGCGATGGCCAAGTGGAC  
TGCGACAACGGCTCAGACGAGCAAGGCTGTCCCCCAAGACGTGCTCCCAGGACGAGTTTCGTGCCACGATGGG  
AAGTGCATCTCTCGGCAGTTCTGTCTGTGACTCAGACCGGGACTGCTTGGACGGCTCAGACGAGGCCCTCCTGCCCC  
GTGCTCACCTGTGGTCCCGCCAGCTTCCAGTGCAACAGCTCCACCTGCATCCCCAGCTGTGGGCTGCGACAAC  
GACCCCGACTGCGAAGATGGCTCGGATGAGTGGCCGAGCGCTGTAGGGGTCTTTACGTGTTCCAAGGGGACAGT  
AGCCCTGTCTGGCCTTCGAGTTCCACTGCCTAAGTGGCGAGTGCATCCACTCCAGCTGGCGCTGTGATGGTGGC  
CCCGACTGCAAGGACAAATCTGACGAGGAAAACCTGCGCTGTGGCCACCTGTGCCCCTGACGAATTCAGTGCTCT  
GATGGAACTGCATCCATGGCAGCCGGCAGTGTGACCGGGAATATGACTGCAAGGACATGAGCGATGAAGTTGGC  
TGCGTTAATGTGACACTCTGCGAGGGACCAACAAGTTCAAGTGTACAGCGGCGAATGCATCACCTGGACAAA  
GTCTGCAACATGGCTAGAGACTGCCGGGACTGGTCAGATGAACCCATCAAAGAGTGGGGACCAACGAATGCTTG  
GACAACAACGGCGGCTGTTCCACGTCTGCAATGACCTTAAGATCGGCTACGAGTGCCTGTGCCCCGACGGCTTC  
CAGCTGGTGGCCAGCGAAGATGCGAAGATATCGATGAGTGTGAGGATCCCGACACCTGCAGCCAGCTCTGCGTG  
AACCTGGAGGGTGGCTACAAGTGCCAGTGTGAGGAAGGCTTCCAGCTGGACCCCAACGAGGCCCTGCAAGGCT  
GTGGGCTCCATCGCTACCTCTTCTTCCCAACCGGCACGAGGTGAGGAAGATGACGCTGGACCGGAGCGAGTAC  
ACCAGCCTCATCCCCAACCTGAGGAACGTGGTCTGCTGTGACACGGAGGTGGCCAGCAATAGAATCTACTGGTCT  
GACCTGTCCCAGAGAATGATCTGCAGCACCCAGCTTGACAGAGCCACGGCGTCTCTTCTATGACACCGTCTATC  
AGCAGAGACATCCAGGCCCCGACGGGCTGGCTGTGGACTGGATCCACAGCAACATCTACTGGACCGACTCTGTCT  
CTGGGCACTGTCTCTGTGCGGATACCAAGGGCGTGAAGAGGAAAACGTTATTAGGGGAGAACGGCTCCAAGCCA  
AGGGCCATCGTGGTGGATCCTGTTTATGGCTTCATGTACTGGACTGACTGGGGAACCTCCCGCAAGATCAAGAAA  
GGGGGCTGAATGGTGTGGACATCTACTCGTGGTGGTACTGAAAACATTAGTGGCCCAATGGCATCACCTAGAT  
CTCCTCAGTGGCCGCTCTACTGGGTTGACTCCAAACTTCACTCCATCTCAAGCATCGATGTCAACGGGGGCAAC  
CGGAAGACCATCTTGGAGGATGAAAAGAGGCTGGCCACCCCTTCTCCTTGGCCGTCTTTGAGGACAAAGTATTT  
TGGACAGATATCATCAACGAAGCCATTTTTCAGTGCCAACCGCTCACAGGTTCCGATGTCAACTTGTGGCTGAA  
AACCTACTGTCCCCAGAGGATATGGTTCTTCTCCACAACCTCACCCAGCCAAGAGGAGTGAACCTGTGTGAGAGG  
ACCACCTGAGCAATGGCGCTGCCAGTATCTGTGCTCCCTGCCCGCAGATCAACCCCACTCGCCCCAAGTTT  
ACCTGCGCTGCCCGGACGGCATGCTGCTGGCCAGGGACATGAGGAGCTGCCTCACAGAGGCTGAGGCTGCAGTG  
GCCACCCAGGAGACATCCACCGTCAGGCTAAAGGTGAGTCCACAGCCGTAAGGACACAGCACACAACCCCGA  
CCTGTTCCGACACCTCCCGGCTGCCTGGGGCCACCCCTGGGCTCACACGGTGGAGATAGTGACAATGTCTCAC  
CAAGCTCIGGGCGACGTTGCTGGCAGAGGAAATGAGAAGAAGCCAGTAGCGTGAGGGCTCTGTCCATTGTCTCTC  
CCCATCGTCTCTCTCTCTCTTCTTCTGCTGGGGGCTCTCTTCTATGGAAGAACTGGCGGCTTAAGAACATCAAC  
AGCATCAACTTGGACAACCCCTCTATCAGAAGACCACAGAGGATGAGGTCCACATTGGCCACAACCCAGGACGGC  
TACAGCTACCCCTCGAGACAGATGGTCACTGAGGATGACGTGGCGTGAACATCTGCCTGGAGTCCCGTCCCT  
GCCAGAACCCTTCTGAGACCTCGCCGGCCTTGTTTTATTCAAAGACAGAGAAGACCAAGCATTGCCTGCCAG  
AGCTTTGTTTTATATATTTATTCATCTGGGAGGCAGAACAGGCTTCGGACAGTGCCCATGCAATGGCTTGGGTG  
GGATTTTGGTTTCTTCTCTCTCTCTGTAAGGATAAGAGAAACAGGCCCGGGGGGACAGGATGACACCTCCATTT  
CTCTCCAGGAAGTTTTGAGTTTCTCTCCACCGTGACACAATCTCAAACATGGAAGATGAAAGGGGAGGGGATGT  
CAGGCCAGAGAAGCAAGTGGCTTTCAACACACAACAGCAGATGGCACCACCGGGACCCCTGGCCCTGCCTCAT  
CCACCAATCTCTAAGCCAAACCCCTAAACTCAGGAGTCAACGTGTTTACCTCTTCTATGCAAGCCTTGCTAGACA  
GCCAGGTTAGCCTTTGCCCTGTACCCCCGAATCATGACCCACCCAGTGTCTTTTCAGGTTGGGTTTGTACCTTCC  
TTAAGCCAGGAAAGGGATTATGGCGTCGGAAATGATCTGGCTGAATCCGTGGTGGCACCAGACCAAACTCATT  
CACCAATGATGCCACTTCCAGAGGCAGAGCCTGAGTCACTGGTACCCTTAATATTTATTAAGTGCCTGAGAC  
ACCCGTTTACCTTGGCGTGAGGACACGTGGCCTGCACCCAGGTGTGGCTGTGAGGACACCGCCTGGTGGCCAT  
CCTCCGACCCCTACCCACTTCCATTCCCGTGGTCTCTTGCACCTTCTCAGTTTCAGAGTTGTACACTGTGTACA  
TTTGGCATTGTGTATTATTTTGCACGTGTTTTCTGTCTGTGTGTGGATGGGATCCAGGCCAGGGAAGCC

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**FIGURE 5256B**

CGTGTCAATGAATGCCGGGGACAGAGAGGGGCAGGTTGACCGGGACTTCAAAGCCGTGATCGTGAATATCGAGAA  
CTGCCATTGTCGTCTTTATGTCCGCCACCTAGTGCTTCCACTTCTATGCAAATGCCTCCAAGCCATTCACTTCC  
CCAATCTTGTCTGTTGATGGGTATGTGTTTAAACATGCACGGTGAGGCCGGGCGCAGTGGCTCACGCCTGTAATC  
CCAGCACTTTGGGAGGCCGAGGCGGGTGGATCATGAGGTCAGGAGATCGAGACCATCCTGGCTAACACGTGAAAC  
CCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGTGGTGGCGGGCACCTGTAGTCCCAGCTACTCGGGAGGC  
TGAGGCAGGAGAATGGTGTGAACCCGGGAAGCGGAGCTTGCACTGAGCCGAGATTGCGCCACTGCAGTCCGCAGT  
CTGGCCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAAAAAAAAAACAAAAAAACCATGCATGGTGCATCAGCAG  
CCCATGGCCTCTGGCCAGGCATGGCGAGGCTGAGGTGGGAGGATGGTTTGAGCTCAGGCATTGAGGCTGTCTGTG  
AGCTATGATTATGCCACTGCTTTCCAGCCTGGGCAACATAGTAAGACCCCATCTCTTAAAAATGAATTTGGCCA  
GACACAGGTGCCTCACGCCTGTAATCCAGCACTTTGGGAGGCTGAGCTGGATCACTTGAGTTCAGGAGTTGGAG  
ACCAGGCCTGAGCAACAAAGCGAGATCCCATCTCTACAAAAACCAAAAAGTTAAAAATCAGCTGGGTACGGTGGC  
ACGTGCCTGTGATCCCAGCTACTTGGGAGGCTGAGGCAGGAGGATCGCCTGAGCCCAGGAGGTGGAGGTTGCAGT  
GAGCCATGATCGAGCCACTGCACTCCAGCCTGGGCAACAGATGAAGACCCTATTTAGAAATACAACATAAAAA  
AATAAATAAATCCTCCAGTCTGGATCGTTTGACGGGACTTCAGGTTCTTTCTGAAATCGCCGTGTTACTGTTGCA  
CTGATGTCCGGAGAGACAGTGACAGCCTCCGTGAGACTCCCGCGTGAAGATGTCACAAGGGATTGGCAATTGTCC  
CCAGGGACAAAACACTGTGTCCCCCAGTGCAGGGAACCGTGATAAGCCTTCTGGTTTCGGAGCACGTAAATG  
CGTCCCTGTACAGATAGTGGGGATTTTTTGTATGTTTGCACCTTTGTATATTGGTTGAACTGTTATCACTTATA  
TATATATATATACACACATATATATAAAATCTATTTATTTTGCAAACCCGTGGTTGCTGTATTGTTTCAGTGACT  
ATTCTCGGGGCCCTGTGTAGGGGGTTATTGCCTCTGAAATGCCTCTTCTTTATGTACAAAGATTATTTGCACGAA  
CTGGACTGTGTGCAACGCTTTTTTGGGAGAATGATGTCCCGTTGTATGTATGAGTGGCTTCTGGGAGATGGGTGT  
CACTTTTAAACCACTGTATAGAAGTTTTTGTAGCCTGAATGTCTTACTGTGATCAATTAATTTCTTAAATG

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**FIGURE 5257**

AGTCTGCGGGGCGCGGCCAGGCCCGGCCGACCGCTCTCGGTCTTCGCGTCTGCCAGCCTGGCTGGCAGTCCGTC  
TGTCCATCCCGCCGCGCCGGGGCAGTCTAGGCGGAGCGGGGGCTCAGGCGGCGCGGCCTCGACGCGAGTGAGTG  
TCGTGGTTGGGGTGCTGGACCCAGAGTGCCTACCCTCGCTGCCTGGGCCTCAGTTCCACATCTGCACAATGGG  
GGTGACCATCCCTGCCCTGCTGGCTGCCAGGAGCGGCTGTGAGTCTTCAGGCGTGGATGCAGCCTGGGGGAAGCC  
ATAGGGCGCTTTCACAGGCCCTGGCCTTCACCATGGCGGGAGGGAGACCGCATCTGAAGAGGAGTTTCTCCATCAT  
CCCCTGCTTTGTCTTCGTGGAGTCGGTGTCTGCTGGGCATTGTGATCCTGCTTGCTTACCGCCTGGAGTTCACGGA  
CACCTTCCCTGTGCACACCCAGGGATTCTTCTGCTATGACAGTACCTACGCCAAGCCCTACCCAGGGCCTGAGGC  
TGCCAGCCGAGTGCCTCCTGCTCTTGTCTACGCACTGGTCACTGCCGGGGCCACCCTACGATCCTGCTGGGAGA  
GCTGGCGCGTGCCTTTTTCCCTGCACCACCTTCAGCCGTCCAGTCATCGGGGAGAGCACCATCGTGTCTGGGGC  
CTGCTGCCGCTTCAGCCCCCAGTGCGGAGGCTGGTCCGCTTCCCTGGGGGTCTACTCCTTCGGCCTCTTCACCAC  
GACCATCTTCGCCAACGCGGGGCAGGTGGTGACCGCAATCCACGCCACACTTCCTGTCCGTGTGCCGCCCCAA  
CTACACGGCCCTGGGCTGCCTGCCACCTTCTCCGGATCGGCCAGGTCCCGACCGCTTGTCACTGACCAGGGTGC  
CTGCGCTGGCAGTCCCAGCCTCGTGGCCGCGCGCGCCGCGCCTTCCCTGCAAGGATGCGGGCCCTCTGCGCCTA  
CGCGGTACCTACACAGCGATGTACGTGACTCTCGTGTTCGCGTGAAGGGCTCCCGCCTGGTCAAACCCCTCGCT  
CTGCTGGCCTTGTGTGCCCGCCTTCTGCTGGGCGTGGTCCGCGTGGCCGAGTACCGAAACCACTGGTTCGGA  
CGTGTCTGGCTGGCTTCTGACAGGGGCGGCCATGCCACCTTTTTGGTCACTGCGTTGTGCATAACTTTCAGAG  
CCGGCCACCCTCTGGCCGAAGGCTCTCTCCCTGGGAGGACCTGGGCCAAGCCCCCACCATGGATAGCCCCCTCGA  
AAAGAACCCGAGGTCTGCAGGCCGATTTCGACACCGGCACGGCTACCCCATCCAAGTCGCAGAAGTGCGCCCGC  
CGTGGCCACCTGATCCCCAGCTGTGTCTCCTCCAGGGCCCCAGCCATGTGTTTCGTGCCCCGTGTGCCCGTCTCT  
CGATTGAGGTCTGAGCCGACGCCCTTGCCCCCTGCCCTACCCCTGCCAGCGCCACCCCCAGCCAGGGCCCCCTCG  
CCTTCTCCCTGGACCTGGGGGGCCAGGCGGGGTGGTGGACGTGGCCGGAAGCTGTGCTGCCACGCCCCCTG  
CTGCGGGACCTGTACACCCTGAGTGGACTCTATCCCTCCCCCTTCCACCGGGACAACCTTCAGCCCTTACCTGTTT  
GCCAGCCGTGACCACCTGCTGTGAGGCCCCGACCACCCACCCAGAACTTGCCAGTCCCCACTTCTTCCCTGCCAC  
GCGTGTGTGTGCGTGTGCCACGTGAGTGCCAAAGTCCCCCTGCCCCCAAGCCAGCCAGACCCAGACATTAGAAGA  
TGGCTAGAAGGACATTTAGGAGACATCTGCCTCTCTGCGCCTCTGAGATATCCCGATGGGCACAAATGGAAGGTG  
CGCACTTGCCCCCTACTATTGCCCTTTTAAGGGCCAAAGCTTGACCCCATTGCCATTGCCTGGCTAATGAGAACC  
CCTGGTTCTCAGAATTTTAACCAAAAGGAGTTGGCTCCAACCAATGGGAGCCTTCCCCCTACTTCTTAGAATCCT  
CCTGCAAGAGGGCAACTCCAGCCAGTGTTCAGCGACTGAACAGCCAATAGGAGCCCTTGGTTTCCAGAATTTCTA  
GAGTGGGTGGGCATGATTCCAGTCAATGGGGGACCGCCCGTGTCTAAGCATGTGCAAGGAGAGGAGGGAGATGA  
GGTCATTGTTTGTATTGAGTCTTCTCTCAGAATCAGCGAGCCAGCTGTAGGGTGGGGGGCAGGCTCCCCCATG  
GCAGGGTCTTTGGGGTACCCCTTTTCTCTCAGCCCCCTCCCTGTGTGCGGCCTCTCCACCTCTCACCCACTCTCT  
CCTAATCCCCCTACTTAAGTAGGGCTTGCCCCACTTCAGAGTTTTTGGGGTTCAGGGTGTGTGTCTCCCTTGCC  
TGTGCCCAGGTCAATCCAAACCTTCTGTTATTTATTAGGGCTGTGGGAAGGGTTTTTCTTCTTTTCTTGAAC  
CTGCCCCGTGTTCTTCACTGCCCCCATGCCTCAGCCTCATAAGATGTGCCATCATGGGGGCATGGGTGGAG  
CAGAGGGGCTCCCTCACCCGGGCAGGCAAAGGCAGTGGGTAGAGGAGGCACTGCCCCCTTCTGCCCCCTCC  
TCATCTTTAATAAAGACCTGGCTTCTCATCTTTAATAAAGACCTGTTTGTAACAG



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**FIGURE 5258**

ACTTAGAGGCGCCTGGTCGGGAAGGGCCTGGTCAGCTGCGTCCGGCGGAGGCAGCTGCTGACCCAGCTGTGGACT  
GTGCCGGGGGCGGGGACGGAGGGGCAGGAGCCCTGGGCTCCCCGTGGCGGGGGCTGTATCATGGACCACCTCGG  
GGCGTCCCTCTGGCCCCAGGTTCGGCTCCCTTTGTCTCCTGCTCGCTGGGGCCGCCTGGGCGCCCCCGCCTAACCT  
CCCCGACCCCCAAGTTCGAGAGCAAAGCGGCCTTGCTGGCGGGCCGGGGGCCGAAGAGCTTCTGTGCTTCACCGA  
GCGGTTGGAGGACTTGGTGTGTTTCTGGGAGGAAGCGGCGAGCGCTGGGGTGGGCCCCGGGCAACTACAGCTTCTC  
CTACCAGCTCGAGGATGAGCCATGGAAGCTGTGTGCGCTGCACCAGGCTCCACGGCTCGTGGTGCGGTGCGCTT  
CTGGTGTTCGCTGCCTACAGCCGACAGTCGAGCTTCGTGCCCTTAGAGTTGCGCGTCACAGCAGCCTCCGGCGC  
TCCGCGATATCACCGTGTCTATCCACATCAATGAAGTAGTGCTCCTAGACGCCCCCGTGGGGCTGGTGGCGCGGTT  
GGCTGACGAGAGCGGCCACGTAGTGTGCGCTGGCTCCCGCCGCTGAGACACCCATGACGTCTCACATCCGCTA  
CGAGGTGGACGTCTCGGCCGGCAACGGCGCAGGGAGCGTACAGAGGGTGGAGATCCTGGAGGGCCGACCGAGTG  
TGTGCTGAGCAACCTGCGGGGCGGACGCGCTACACCTTCGCCGTCCGCGCGGTATGGCTGAGCCGAGCTTCGG  
CGGCTTCTGGAGCGCCTGGTTCGGAGCCTGTGTGCTGCTGACGCTAGCGACCTGGACCCCTCATCCTGACGCT  
CTCCCTCATCCTCGTGGTCTATCCTGGTGTGCTGACCGTGTGCGCTGCTCTCCACCGCCGGGCTCTGAAGCA  
GAAGATCTGGCCTGGCATCCCCGAGCCCAGAGAGCGAGTTGAAGGCCTCTTCACCACCCACAAGGGTAACCTCCA  
GCTGTGGCTGTACCAGAATGATGGCTGCCTGTGGTGGAGCCCTGCACCCCTTCACGGAGGACCCACCTGCTTC  
CCTGGAAGTCCTCTCAGAGCGCTGCTGGGGGACGATGCAGGCAGTGGAGCCGGGGACAGATGATGAGGGCCCCCT  
GCTGGAGCCAGTGGGCAGTGAGCATGCCAGGATACCTATCTGGTGTGACAAATGGTTGCTGCCCCGGAACCC  
GCCAGTGAGGACCTCCAGGGCCTGGTGGCAGTGTGGACATAGTGGCCATGGATGAAGGCTCAGAAGCATCCTC  
CTGCTCATCTGCTTTGGCCTCGAAGCCCAGCCCAGAGGGAGCCTCTGCTGCCAGCTTTGAGTACACTATCCTGGA  
CCCCAGCTCCCAGCTCTTGCGTCCATGGACACTGTGCCCTGAGCTGCCCCCTACCCACCCACCTAAAGTACCT  
GTACCTTGTGGTATCTGACTCTGGCATCTCAACTGACTACAGCTCAGGGGACTCCCAGGGAGCCCAAGGGGGCTT  
ATCCGATGGCCCCCTACTCCAACCCTTATGAGAACAGCCTTATCCCAGCCGCTGAGCCTCTGCCCCCAGCTATGT  
GGCTTGCTCTTAGGACACCAGGCTGCAGATGATCAGGGATCCAATATGACTCAGAGAACCAGTGCAGACTCAAGA  
CTTATGGAACAGGGATGGCGAGGCCTCTCTCAGGAGCAGGGGCATTGCTGATTTTGTCTGCCCAATCCATCCTGC  
TCAGGAAACCACAACCTTGAGTATTTTAAATATGTATAGTTTTTTTG

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**FIGURE 5259**

MDHLGASLWPQVGSCLLLAGAAWAPPPNLPDPKFESKAALLAARGPEELLCFTERLEDLVCFWEEAASAGVGPG  
NYSFSYQLEDEFWKLRLHQAPTARGAVRFWCSLPTADTSSFVPLELRVTAASGAPRYHRVIHINEVVLLDAPVG  
LVARLADES GHVVLRLWLPPEPMTSHIRYVDVSAGNGAGSVQRVEILEGRTECVLSNLRGRTRYTF AVRARMA  
EPSFGGFWSAWSEPVSLTSPDLPLILTSLILVVLVLLTVLALLSHRRALKQKIWPGIPSPSEFEGLFTTH  
KGNFQLWLYQNDGCLWWSPTFTEDPPASLEVLSERCWGTMQAVEPGTDDEGPLLEPVGSEHAQDTYLVLDKWL  
LPRNPPSEDLPGP GGSVDIVAMDEGSEASSCSALASKPSPEGASAA SFYTILDPSSQLLRPWTLCPELPPTPP  
HLKYLYLVSDSGISTDYSSGDSQGAQGGLSDGPYSNPYENSLIPAAEPLPPSYVACS

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**FIGURE 5260**

ATTTTTCAGAGCCCTAGGAATCCGAGCTGACGGATCCCTGACAGGGGCGACTGACTCCTAGTTATCCCCCTAACC  
CCTAGGGGCTTCAGCCCCAACCCCATCATGACATCTCCTCTGTGACAGGGCGGCCTCCGCCAACGCCCTGCCTCC  
TCAGGACCAGGCTTCGACGCCCTCTTCCAGGGTCAAGGGCAGGGAGGCTTCGGGCAAACCCAGCCACCTCCGAGG  
CAAGGGCACAGCCCAGGCGTGGACCCCAGGCCGTTCCAAGGGAGGATCCTTCCACAGAGGTGCAGGGAAGCCCTC  
TGTGCACTCTCAGGTGGCTGAGTTACATAAAAAGATACAACCTGTTAGAGGGTGACCGGAAGGCTTTTTTTGAGAG  
CTCTCAGTGGAACATCAAGAAGAACCAGGAGACCATCAGTCAGCTCCGCAAGGAGACTAAGGCACTGGAACATAA  
GCTGCTGGACCTGCTCAAGGGAGATGAGAAAGTGGTCCAGGCAGTGATTTCGGAATGGAAGTGGGAGAAGCCATA  
CCTGAAGAACAGGACAGGACAGGCCCTGGAGCACCTAGACCACCGGCTGAGGGAGAAGGTGAAGCAGCAGAACGC  
CCTGCGGCACCAAGGTGGTGTGCGGCAGAGGCGGCTGGAGGAGCTCCAGCTGCAGCACAGCCTGCGCCTTCTGGA  
GATGGCGGAGGCGCAAAACAGACACACGGAGGTGGCCAAGACCATGCGGAACCTGGAGAACCCTGGAGAAGGC  
CCAGATGAAGGCGCAGGAGGCCGAGCACATTACCAGCGTGTACCTGCAGCTCAAGGCCCTATCTAATGGACGAGAG  
CCTCAACTTGGAGAACCGGCTGGACTCCATGGAGGCTGAGGTGGTGGAGACCAACATGAGCTGGAGGCACTGCA  
CGTGGTGAACCAAGAGGCCCTCAATGCCCGGGACATTGCCAAGAACCAGCTGCAGTACCTAGAGGAGACCTTGGT  
TCGAGAGCGCAAGAAGCGGGAACGCTACATAAGTGAGTGCAAGAAGCGCGCCGAGGAGAAGAACTGGAGAACGA  
GCGCATGGAGCGCAAGACCCACCGCGAGCACCTGCTGCTACAGTCCGACGACACCATCCAGGACAGCCTGCATGC  
CAAGGAGGAGGAGCTGCGGCAGCGCTGGAGCATGTACCAGATGGAGGTGATCTTTGGCAAGGTCAAGGACGCCAC  
TGGCACTGACGAGACGCACTCGTTGGTGGCGCGGTTCTGGCCAGGGCGACACCTTCGCGCAGTTGGAGACGCT  
CAAGAGCGAGAACGAGCAGACGTTGGTGGAGGTGAAGCAGGAGAAGCAACAACCTGCAGCGGGAGCTGGAAGACCT  
CAAGTACTCGGGGGAGGCCACGCTGGTGGAGCCAGCAGAACTGCAAGCCGAGGCGCAGGAGCGTCTCAAGAAGGA  
GGAGCGGGCGGCACGCCGAGGCCAAGGACCAGCTGGAGCGCGCTTGCAGGGCGATGCAAGTGGCCAAGGACAGCCT  
GGAGCACCTGGCCAGCAAGCTGATCCACATCACTGTGGAGGACGGCCGCTTCGCGGGAAAGGAGCTGGATCCCCA  
GGCAGATAACTATGTGCCAAACCTGCTGGGCCCTCGTGGAGGAAAAGCTGCTGAAACTGCAGGCGCAGCTCCAGGG  
CCACGACGTGCAGGAGATGCTGTGCCACATCGCTAACCGCGAGTTCCTCGCCAGCTTAGAGGGAAGGCTGCCCGA  
ATACAACACCCGCATCGCCCTGCCCCCTTGCCACTTCCAAGGACAAGTTTTTTGACGAAGAGAGTGAGGAGGAGGA  
CAACGAGGTAGTGACCCGCGCATCACTCAAGATCCGTTCCAGAAATTAATCGAAAGTCACAAGAAGCACCGTCG  
CTCTCGGAGGTCTAGACTCGTCTGACACCCACAGGCGGCCCTTCGGAGCCCCGATCCCTCCGGGTCTAG  
CGCAGGCCCCACGGGGCCCTTCAGGGGCTGAACGCGGCCCGGACCGGGAACGGAGGCGGCCAGCGCGCCCGGA  
GGGGAGGAAGGGGCCGGGCCAGACGTTCCACAGTAAATCTCCCCAGCTGGGTCCGCCCCGGCCTCAGAGTTGCG  
CAATAAATGTTACCGACCATG

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**FIGURE 5261**

GCTGCGCCGCCATTAAGAGCTAGCCCTCAGAACTATCCTCTCTAAGGTTTCACAGTCCTGCCCAAGATGGCCGTC  
TCGGCTCTGGCACCGCCCCACTCCTGCCTCTCCCAACATGGCGACCCTGAGTCTCCGTTCCCGGTGCGGAACGT  
ACGACCGGAAGTGACGGGGTCCAGAAATTTCCGCTTCTTTCTGCAGCAGGAACCGCGGCTGCTGGACAAGAGGG  
GTGCGGTGGATACTGACCTTTGCTCCGGCCTCGTCGTGAAGACACAGCGCATCTCCCCGCTGTAGGCTTCTCCC  
ACAGAACCCGTTTCGGGCCTCAGAGCGTCTGGTGAGATGCTGTTGCCGCTGCTGCTGCTACCCATGTGCTGG  
GCCGTGGAGGTCAAGAGGCCCGGGGGCGTCTCCCTACCAATCATCACTTCTACGATGAGTCCAAGCCTTTCACC  
TGCTTGGACGGTTCGGCCACCATCCCATTTGATCAGGTCAACGATGACTATTGCGACTGCAAAGATGGCTCTGAC  
GAGCCAGGCACGGCTGCCTGTCTAATGGCAGCTTCCACTGCACCAACACTGGCTATAAGCCCTGTATATCCCC  
TCCAACCGGGTCAACGATGGTGTGTTGTGACTGCTGCGATGGAACAGACGAGTACAACAGCGGCGTCACTGTGAG  
AACACCTCAGAGAGAAGGGCCGTAAGGAGAGAGAGTCCCTGCAGCAGATGGCCGAGGTACCCCGCAAGGGTTCC  
GTCTGAAGAAGATCCTTATTGAGGACTGGAAGAAGGCACGGGAGGAGAAGCAGAAAAAGCTCATTGAGCTACAGG  
CTGGGAAGAAGTCTCTGGAAGACCAGGTGGAGATGCTGCGGACAGTGAAGGAGGAAGCTGAGAAGCCAGAGAGAG  
AGGCCAAAGAGCAGCACCAGAAGCTGTGGGAAGAGCAGCTGGCTGCTGCCAAGGCCCAACAGGAGCAGGAGCTGG  
CGGCTGATGCCTTCAAGGAGCTGGATGATGACATGGACGGGACGGTCTCGGTGACTGAGCTGCAGACTACCCGG  
AGCTGGACACAGATGGGGATGGGGCGTTGTGAGAAGCGGAAGCTAGGCCCTCCTCAGTGGGGACACACAGACAG  
ACGCCACCTCTTCTACGACCGCGTCTGGGCCGCCATCAGGGACAAGTACCGGTCCGAGGCACTGCCACCGACC  
TTCCAGCACCTTCTGCCCCGACTTGACGGAGCCCAAGGAGGAGCAGCCGCCAGTGCCCTCGTCGCCACAGAGG  
AGGAGGAGGAGGAGGAGGAGGAGGAAGAAGAGGCTGAAGAAGAGGAGGAGGAGGAGGATTCCGAGGTGCAGG  
GGGAGCAGCCCAAGGAGGCCCAACCGCCACTGTACCCCCGAGCCGGCCAGCCCTGCTGAGGAAGACAAAATGC  
CGCCCTACGACGAGCAGACGAGGCCTTCATCGATGCTGCCCAGGAGGCCCGCAACAAGTTTCGAGGAGGCCGAGC  
GGTCGCTGAAGGACATGGAGGAGTCCATCAGGAACCTGGAGCAAGAGATTTCTTTTGACTTTGGCCCCAACGGGG  
AGTTTGCTTACCTGTACAGCCAGTGCTACGAGCTCACCACCAACGAATACGTCTACCGCCTCTGCCCTTCAAGC  
TTGTCTCGCAGAAACCCAACTCGGGGGCTCTCCACCAGCCTTGGCACCTGGGGCTCATGGATTGGCCCCGACC  
ACGACAAGTTCAGTGCCATGAAGTATGAGCAAGGCACGGGCTGCTGGCAGGGCCCCAACCGCTCCACCACCGTGC  
GCCTCCTGTGCGGGAAAGAGACCATGGTGACCAGCACCACAGAGCCCAGTCGCTGCGAGTACCTCATGGAGCTGA  
TGACGCCAGCCGCTGCCCGGAGCCACCGCTGAAGCACCCACCGAAGACGACCATGACGAGCTCTAGCTGGATG  
GGCGCAGAGGTGGGCGGGGAGGTGGAGTCTCGTCGGCCTGCCCCAGCAAGGGGAGGCGGCGGGCCCTGAGGAAGA  
TGGACCCACATGGCCACTCTATCAACCTGTGTCCCATGTTCCCTGCTTTTTTGTGTTTTTGTGAGGTGGAG  
TCTCACTCTTTGGCCCAGGCTGGAGTGCAGTGATGCGACCTCAGCTGACTGCAACCTCTACCTCCGGGTTCAA  
CAATTGTCTTGTCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGTGCACCACCATGCCTGGCTAATTTTTAGTAG  
AGATGGGGTTTACCATGTTGGCCTGGATGGTCTCGAACTCCTGACCTCAGATGATCCACCTGCCTTGGCCTCCC  
AAAGTGCTGGGATTACAGGCATGAGCCACCACACCCGGCCATCTCCTGCCTTTTTTTTTTGGATGGAGTTTAC  
TCTTGTGTCGAGATCATGCTACTGCACTCTCCAGCCTGGGCTACAGAGTGAGACTCTCAAAAAAAAAAATAAT  
AATAATAAGAGAAAATAGACAAGGTCTCCAGGCTGGTCAACTCCTGGCCTCAAATGATCCTCCACCTCAGCCTC  
CCAAGCAGCCGGGACTACAGGCAAACATACCATGTCCAGCTGTCCCAGCTTTCTAATCTGGTCTTTCTCTTGC  
CCCAGAACCTCAAGAAGGCATGAAGCCAGCCCTGCAGTGCCGTCCACCCGCCCTCTGGGCTGCTGTGGCTC  
TGTTGCCCTCCTCTGTGGCGGCAGGACCTTTGTGGGGCTTCGTGCCCTGCTCTGGGGCCCAGGCGGGGCTGGTCC  
ACATTTCCAGGCCCAACAGCCTTCAAAGATGGGTAAAGGAGCTTGCCCTCCCTGGGCCCCCACCTTGGTGACT  
CGCCCCACCACCCCAAGCCCTGTCCCTGCCACCCCTCCTAGTGGGGACTAGTGAATGACTTGACCTGTGACCTCA  
ATACAATAAATGTGATCCCCACCC

[illegible]

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**FIGURE 5263**

MGRRKSKRKPPPKKKMTGTLETQFTCPFCNHEKSCDVKMDRARNTGVISCTVCLEEFQTPITYLSEPVDVYSDWI  
DACEAANQ

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**FIGURE 5264**

TTTCTGCCCCGTGGACACCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCACCCTGCCGTCATGCTCTAAGTCAGAGT  
CTCCTAAAGAGCCCGAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACCTGATGAGAGCCTGA  
GGAGCCATTTTGAGCAATGGGGAACGCTCACGGACTGTGTGGTAATGAGAGATCCAAACACCAAGCGCTCCAGGG  
GCTTTGGGTTTGTACGTATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGATG  
GAAGAGTTGTGGAACCAAGAGAGCTGTCTCCAGAGAAGATTCTCAAAGACCAGGTGCCCCACTTAACTGTGAAAA  
AGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAAGAGATTATTTGAACAGTATGGAAAAA  
TTGAAGTGATTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGACC  
ATGACTCCGTGGATAAGACTGTCATTTCAGAAATACCATACTGTGAATGGCCACAACCTGTGAAGTTAGAAAAGCCC  
TGTCAAAGCAAGAGATGGCTAGTGCTTCATCCAGCCAAAGAGGTCTGAAGTGGTTCTGGAAACTTTGGTGGTGGTC  
GTGGAGGTGGTTTCGGTGGGAATGACAACCTTCGGTTCGTGGAGGAACTTCAGTGGTTCGTGGTGGCTTTGGTGGCA  
GCCATGGTGGTGGTGGATATGGTGGCAGTGGGGATGGCTATAATGGATTGGTAATGATGGAAGCAATTTTGGAG  
GTGGTGGAAAGCTACAATGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAATT  
TTGGAGGCAGAAAGCTCTGGCCCCATGGCGGTGGAGGCCAATACTTTGCAAACCACGAAACCAAGTGGCTATGG  
CGGTTCCAGCAGCAGCAGTAGCTATGGCAGTGGCAGAAGATTTTAATTAGGAAACAAAGCTTAGCAGGAGAGGAG  
AGCCAGAGAAGTGACAGGGAAGCTACAGGTTACAATAGATTTGTGAACCTCAGCCAAGCACAGTGGTGGCAGGGCC  
TAGCTGCTACAAAGAAGACATGTTTTAGACAAATACTCATGTGTATGGGCAAAAACTCGAGGACTGTATTTGTG  
ACTAATTGTATAACAGGTTATTTTAGITTCIGTCTGTGTGAAAGTGTAAGCATTCCAACAAAGGGTTTTAACGT  
AGATTTCTTTTGCACCCCATGCTGTTGATTGCTAAATGTAATAGTCTGATCGTGATGCTGAATAAATGTCTTTT  
TTTT

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**FIGURE 5265**

MSKSESPKEPEQLRKLFIGGLSFETTDESLRSHFEQWGTLTDCVVMRDPNTKRSRGFGFVITYATVEEVDAAMNAR  
PHKVDGRVVEPKRAVSREDSQRPGAHLTVKKIFVGGIKEDTEEHHLRDYFEQYGKIEVIEIMTDRSGGKKRGFAF  
VTFDDHDSVDKTVIQKYHTVNGHNCEVRKALSKQEMASASSSQGRSGSGNFGGGRGGGFGGNDNFGRGGNFSGR  
GGFGGSHGGGGYGGSGDGYNGFGNDGSNFGGGGSYNDFGNYNQSSNFGPMKGNFGGRSSGPYGGGGQYFAKPR  
NQVAMAVPAAAVAMAVAEDFN



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**FIGURE 5266**

CTCTTTCCCTTCAGTGTGCCACTGAAGATCCTGGTGTGCCATGGGCCGCCGCCCGCCCGTTGTTACCGGTATT  
GTAAGAACAAGCCGTACCCAAAGTCTCGCTTCTGCCGAGGTGTCCCTGATGCCAAGATTTCGCATTTTGGACCTGG  
GGCGGAAAAAGGCAAAAGTGGATGAGTTTCCGCTCTGTGGCCACATGGTGTGAGATGAATATGAGCAGCTGTCCT  
CTGAAGCCCTGGAGGCTGCCCCGAATTTGTGCCAATAAGTACATGGTAAAAAGTTGTGGCAAAGATGGCTTCATA  
TCCGGGTGCGGCTCCACCCCTTCCACGTCATCCGCATCAACAAGATGTCGTCCTGTGCTGGGGCTGACAGGCTCC  
AAACAGGAATGCGAGGTGCCTTTGGAAAGCCCCAGGGCACTGTGGCCAGGGTTCACATTGGCCAAGTTATCATGT  
CCATCCGCACCAAGCTGCAGAACAAGGAGCGTGTGATTGAGGCCCTGCGCAGGGCCAAGTTCAAGTTTCCTGGCC  
GCCAGAAGATCCACATCTCAAAGAAGTGGGGCTTACCAAGTTCAATGCTGATGAATTTGAAGACATGGTGGCTG  
CTCTGGACAAGTGGTGGGCCCTGCACTCATGAGGGCTTCCAATGTGCTGCCCCCTCTTAATACTCACCAATAAA  
TTCTACTT